

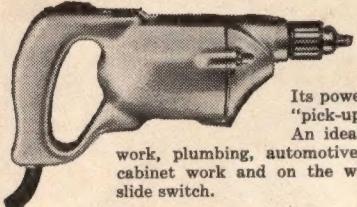
"Van Dorn"

POWERFUL
ELECTRIC TOOLS

CONDENSED CATALOG

"Van Dorn" POWERFUL ELECTRIC TOOLS

1/4" JUNIOR ELECTRIC DRILL



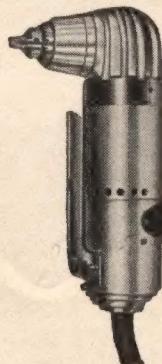
Designed for intermittent service in shops and for maintenance work. "Compo" oilless bearings for smooth operation.

Its powerful motor will handle hundreds of "pick-up" drilling jobs in metal and wood.

An ideal drill for tool kit in maintenance work, plumbing, automotive repair, electrical, carpentry and cabinet work and on the work bench. Has thumb operated slide switch.

Capacity: In steel.....	up to 1/4"	In hardwood.....	up to 1/2"
Speed: No load.....	1800 R.P.M.	Full load.....	1050 R.P.M.
Weight: Net.....	3 1/4 lbs.	Shipping Weight.....	5 lbs.
Overall length.....	10 1/4"		
Price, complete, specify voltage (Code No. V-30).....	\$19.95		

1/4" SHORTY ELECTRIC DRILL (BALL-BEARING EQUIPPED)

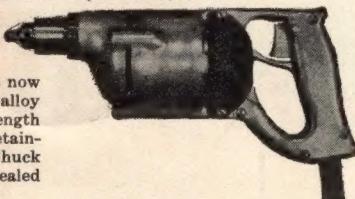


Designed with chuck spindle at right angles to motor, reduces working clearance to 4 1/2". Three switch arrangements fit any working needs.

SPECIFICATIONS

	Switch-in-line	Paddle Switch	Toggle Switch
Capacity: in steel.....	up to 1/4"	up to 1/4"	up to 1/4"
Speed: No-load (Standard).....	2500 R.P.M.*	2500 R.P.M.*	2500 R.P.M.*
Full-load.....	1600 R.P.M.	1600 R.P.M.	1600 R.P.M.
*Optional No-load Speeds (at no extra cost).....	{ 3700 R.P.M. 5000 R.P.M.	{ 3700 R.P.M. 5000 R.P.M.	{ 3700 R.P.M. 5000 R.P.M.
Weight: Net.....	3 1/2 lbs.	3 1/2 lbs.	3 1/2 lbs.
Shipping.....	5 lbs.	5 lbs.	5 lbs.
Overall Length.....	4 1/2"	4 1/2"	4 1/2"
Direction of chuck spindle.....	7 1/4"	8 1/4"	8 1/4"
Direction of motor.....	V-26	V-287	V-298
Code No. (specify voltage).....			
Price, Complete.....	\$35.00	\$38.00	\$38.00

1/4" STANDARD DRILL (BALL-BEARING EQUIPPED)

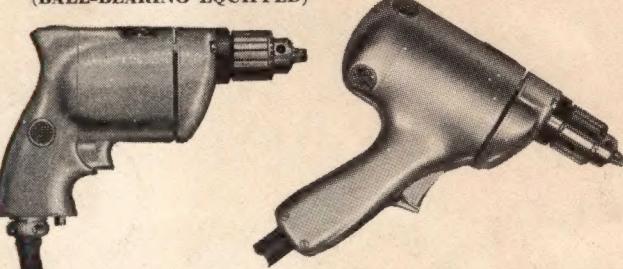


The popular 1/4" Standard Drill is now supplied in die-cast aluminum alloy housings. This feature adds strength and ability to stand abuse, while retaining light weight-to-power ratio. Chuck spindle bearing is double grease sealed with inner and outer races locked.

Capacity in steel.....	up to 1/4"
Speed: No-load (Standard).....	2000 R.P.M.
Optional No-load Speeds (at no extra cost).....	{ 3500 R.P.M. 5000 R.P.M.
Net Weight.....	5 1/4 lbs.
Shipping Weight.....	7 1/2 lbs.
Overall length.....	12 1/4"
Code No. (specify voltage).....	V-31
Price, complete.....	\$38.00

Equipped with No. 24322 Chuck Protector..... \$1.00 extra

THE 1/4" HOLGUN ELECTRIC DRILL (BALL-BEARING EQUIPPED)



A perfectly proportioned drill of surprising compactness and smooth power. Important structural features include "PISTOL GRIP AND TRIGGER SWITCH", new spindle bearing and splined spindle gear mounting, ball-bearings, 12-tooth pinion gear, screened ventilating inlets.

	Standard Speed Model	Low Speed Model
Capacity in steel.....	up to 1/4"	up to 1/4"
No-load Speed.....	1700 R.P.M.*	500 R.P.M.†
Weight: Net.....	2 3/4 lbs.	3 lbs.
Shipping.....	4 1/4 lbs.	4 1/4 lbs.
Overall length.....	6 3/4"	7 1/2"
Spindle Offset.....	9/16"	5/8"
Code No.	V-345	V-346
Price, complete, specify voltage.....	\$32.50	\$38.00

End-Handle Heavy-Duty HOLGUN

	up to 1/4"	up to 1/4"
Capacity in steel.....	1700 R.P.M.*	500 R.P.M.†
No-load Speed.....	3 3/4 lbs.	4 lbs.
Weight: Net.....	5 1/2 lbs.	5 1/4 lbs.
Shipping.....	7 3/4"	8 1/4"
Overall length.....	9/16"	3/4"
Spindle Offset.....	V-457	V-460
Code No.		
Price, complete, specify voltage.....	\$36.00	\$41.50

Side-Handle Heavy-Duty HOLGUN

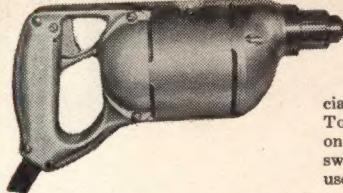
	up to 1/4"	up to 1/4"
Capacity in steel.....	1700 R.P.M.*	500 R.P.M.†
No-load Speed.....	4 lbs.	4 1/4 lbs.
Weight: Net.....	6 lbs.	6 1/4 lbs.
Shipping.....	8 1/4"	8 1/4"
Overall length.....	9/16"	3/4"
Spindle Offset.....	V-459	V-462
Code No.		
Price, complete, specify voltage.....	\$36.00	\$41.50

*Optional speeds (no extra cost)—2500, 3500 or 5000 R.P.M.

†Optional speeds (no extra cost)—750 or 1000 R.P.M.

1/4" HEAVY DUTY DRILL

(BALL-BEARING EQUIPPED)



A sturdy, perfectly balanced drill for constant service on production and heavy duty maintenance work. Especially suited to driving Carbon Cleaning Tools. Armature and chuck mounted on ball bearings. Automatic release switch with thumb latch for optional use.

Capacity: In steel.....	up to 1/4"	In hardwood.....	1/2"
Speed: No load.....	2000 R.P.M.	Full load.....	1280 R.P.M.
Weight: Net.....	6 3/4 lbs.	Shipping.....	9 3/4 lbs.
Overall length.....			12 1/4"
Price, with geared chuck and key—(Code No. V-32).....			\$45.00
Price, with Portomatic keyless chuck (Code No. V-386).....			\$48.00

5/16" HEAVY DUTY ELECTRIC DRILL

(BALL-BEARING EQUIPPED)

(SEE ILLUSTRATION OF 1/4" HEAVY DUTY)

Designed for industrial production service on cabinet and body assembly, and especially suited to lead hole drilling on screwdriving operations. Automatic release switch equipped with thumb latch for optional use. Armature and chuck spindle mounted on ball bearings.

Capacity: In steel.....	up to 5/16"	In hardwood.....	5/8"
Speed: No load.....	1400 R.P.M.*	Full load.....	920 R.P.M.
Weight: Net.....	7 lbs.	Shipping.....	9 3/4 lbs.
Overall length.....			12 3/4"
Price, with geared chuck and key (Code No. V-360).....			\$48.00
Price, with Portomatic keyless chuck (Code No. V-387).....			\$51.00

*Special Speed—1000 R.P.M.—\$2.50 extra.

STANDARD EQUIPMENT. Drills shown above—3-conductor cable and plug; automatic-release trigger switch and locking pin (except 1/4" Shorty and 1/4" Jr.); 3 jaw Jacobs threaded chuck and key; Universal motor, operating on A.C. or D.C.

STANDARD VOLTAGE for Drills shown above—110; also available for 220 or 250 volts. 1/4" Std. Drill Only, also 32 Volts.

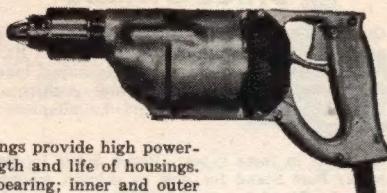
DRILL CAPACITIES in hardwood are up to twice drill capacity in steel.



"Van Dorn"

POWERFUL ELECTRIC TOOLS

3/8" STANDARD BALL-BEARING DRILL



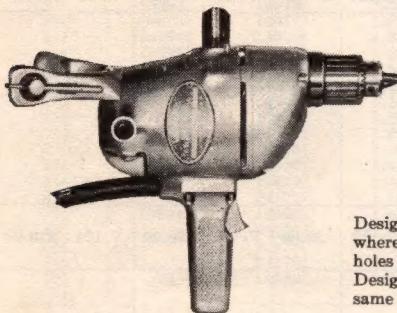
Die-cast aluminum alloy housings provide high power-to-weight ratio, improve strength and life of housings. Double grease sealed spindle bearing; inner and outer races locked in place.

SPECIFICATIONS

Capacity, in steel.....	up to $\frac{3}{16}$ "
No-load Speed.....	700 R.P.M.*
*Optional no-load speeds (at no extra cost).....	{ 350, 500, or 1100 R.P.M.
Weight: Net.....	6 $\frac{1}{2}$ lbs.
Shipping.....	8 $\frac{1}{2}$ lbs.
Overall length.....	13 $\frac{5}{8}$ "
Code No. (specify voltage).....	V-490
Price, complete.....	\$40.00

This Drill can be furnished with $\frac{5}{16}$ " geared chuck and no-load speed of 1100 R.P.M. at no extra cost.

3/8" HEAVY DUTY BALL-BEARING DRILL

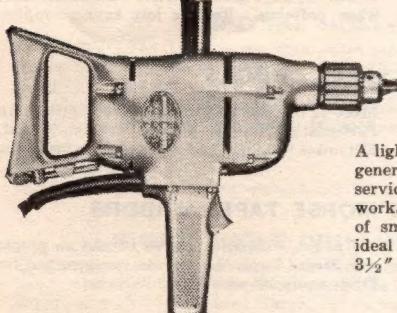


Designed for industrial use in plants where production drilling of $\frac{3}{8}$ " holes at high speed is required. Design and construction features same as for $\frac{3}{4}$ " Standard Drill.

SPECIFICATIONS

Capacity, in steel.....	up to $\frac{3}{16}$ "
No-load Speed.....	900 R.P.M.
Weight: Net.....	9 $\frac{1}{2}$ lbs.
Shipping.....	12 $\frac{3}{4}$ lbs.
Overall length.....	13 $\frac{1}{2}$ "
Code No. (specify voltage).....	V-362
Price, complete.....	\$53.00

1/2" JUNIOR DRILL



A light weight tool designed for the general shop and for intermittent service in maintenance and repair work. "Compo" bearings for years of smooth service. Spindle speed ideal for driving hole saws up to $3\frac{1}{2}$ " capacity.

SPECIFICATIONS

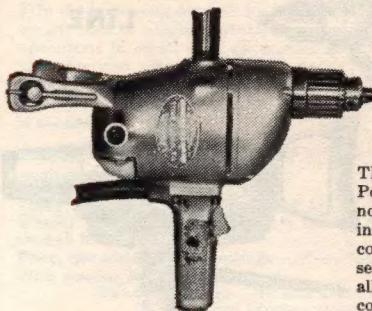
Capacity, in steel.....	up to $\frac{1}{2}$ "
No-load Speed.....	375 R.P.M.
Weight: Net.....	9 $\frac{1}{2}$ lbs.
Shipping.....	11 $\frac{3}{4}$ lbs.
Overall length.....	14 $\frac{1}{4}$ "
Code No. (specify voltage).....	V-38
Price, complete.....	\$35.00

STANDARD EQUIPMENT. All Drills shown above—3 conductor cable and plug; automatic-release trigger switch and locking pin; 3 jaw Jacobs threaded chuck and key; Universal motor, operating on A.C. or D.C.

STANDARD VOLTAGE for all Drills—110; also available for 220 or 250 volts. $\frac{1}{2}$ " Standard Drill only, also 32 volts.

DRILL CAPACITIES in hardwood are up to twice drill capacity in steel.

1/2" STANDARD BALL-BEARING DRILL

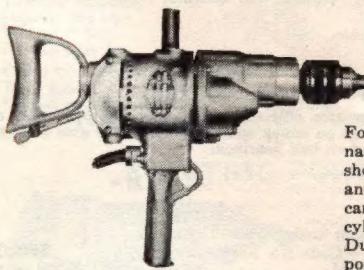


The most popular general purpose Portable Electric Drill. You'll note its perfect operating balance instantly; also the close-coupled construction, minimum spindle offset and horizontal spade handle—all so important when drilling in confined space.

SPECIFICATIONS

Capacity, in steel.....	up to $\frac{1}{2}$ "
No-load Speed.....	400 R.P.M.
Weight: Net.....	9 $\frac{1}{2}$ lbs.
Shipping.....	13 lbs.
Overall length.....	13 $\frac{3}{4}$ "
Code No. (specify voltage).....	V-361
Price, complete.....	\$53.00

5/8" STANDARD BALL-BEARING DRILL

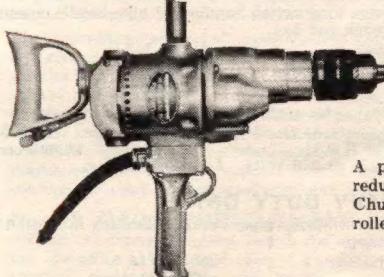


For garages, body shops, maintenance crews and general service shop work. Jacobs geared chuck and key. Correct spindle speed for carbon bits, augers, Hole Saws, cylinder hones, hard metals. Heavy-Duty bearing construction, ample power, light weight.

SPECIFICATIONS

Capacity, in steel.....	$\frac{5}{16}$ " to $\frac{3}{8}$ "
No-load speed.....	300 R.P.M.
Weight: Net.....	17 lbs.
Shipping.....	21 $\frac{3}{4}$ lbs.
Overall length.....	18"
Code No. (specify voltage).....	V-238
Price, complete.....	\$60.00

3/4" STANDARD BALL-BEARING DRILL

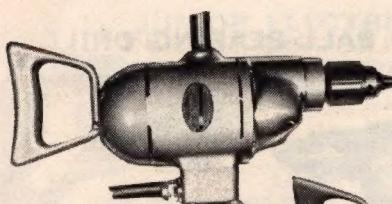


A powerful tool, with triple gear reduction for low spindle speed. Chuck operates on Timken tapered roller bearings.

SPECIFICATIONS

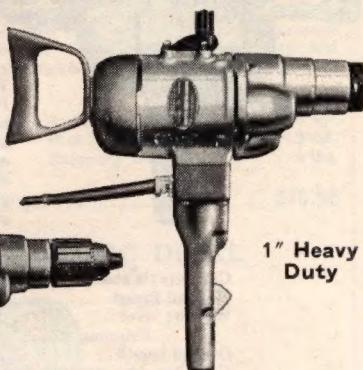
Capacity, in steel.....	$\frac{5}{16}$ " to $\frac{3}{8}$ "
No-load Speed.....	250 R.P.M.
Weight: Net.....	19 $\frac{1}{2}$ lbs.
Shipping.....	25 $\frac{1}{2}$ lbs.
Overall length.....	18 $\frac{3}{4}$ "
Code No. (specify voltage).....	V-239
Price, complete.....	\$68.00

"Van Dorn" POWERFUL ELECTRIC TOOLS



1/2" Heavy Duty

HEAVY-DUTY DRILL LINE



1" Heavy Duty



3/4" Heavy Duty

Designed throughout for severe use. Ample power, ball-bearings, with double ball-bearings or Timken roller bearings on spindle. Sturdy housings; rugged gears, pinions, and spindles.

1/2" HEAVY DUTY DRILL

Designed for better balance, greater efficiency and smoother operation on heavy-duty service. Ball bearings on chuck spindle absorb both side and end thrust. Armature shaft mounted on ball bearings.

Capacity, in steel..... up to $\frac{1}{2}$ "
No-load Speed..... 500 R.P.M.*
Net weight..... 17 lbs.
Overall length..... 18 $\frac{1}{2}$ "

Optional—Nos. 1 or 2 Morse Taper Socket instead of chuck.
Price, complete, specify voltage—(Code No. V-40)..... \$68.00
*Special Speeds: 750 or 900 R.P.M..... \$5.00 extra
Available for 110, 220 or 250 volts. Universal Motor.

5/8" HEAVY DUTY DRILL

Equipped with roller spindle bearing, Jacobs geared chuck and key.

Capacity, in steel..... $\frac{5}{8}$ " to $\frac{5}{8}$ "
No-load Speed..... 450 R.P.M.
Net weight..... 21 $\frac{1}{2}$ lbs.
Overall length..... 20"

Optional—No. 2 Morse Taper Socket instead of chuck.
Price, complete, specify voltage—(Code No. V-42)..... \$83.00
Available for 110, 220 or 250 volts. Universal Motor.

3/4" HEAVY DUTY DRILL

Taper-roller spindle bearing, extra long switch handle and pipe handle, special safety switch, Jacobs geared chuck and key.

Capacity, in steel..... $\frac{3}{8}$ " to $\frac{3}{4}$ "
No-load Speed..... 375 R.P.M.*
Net weight..... 27 $\frac{1}{2}$ lbs.
Overall length..... 21"

Optional—Nos. 2 or 3 Morse Taper Socket instead of chuck.
Price, complete, specify voltage—(Code No. V-45)..... \$94.00
*Special Speeds: 275, 600 or 900 R.P.M..... \$5.00 extra
Available for 110, 220 or 250 volts. Universal Motor.

1" HEAVY DUTY DRILL

Taper-roller spindle bearing, No. 3 Morse taper socket. Drilling in steel, 1"; light reaming, $\frac{3}{4}$ "; heavy reaming, $\frac{5}{8}$ ".

No-load Speed..... 350 R.P.M.*
Net weight..... 28 $\frac{1}{2}$ lbs.
Overall length..... 20"

Price, complete, specify voltage—(Code No. V-47)..... \$115.00
*Special Speeds—250 or 600 R.P.M..... \$5.00 extra
Available for 110, 220 or 250 volts. Universal Motor.

1 1/4" HEAVY DUTY DRILL

A new unit of increased power, with extra long safety switch and pipe handles. Motor housing is cast with adaptor pad to fit this Drill to No. 80 Drill Stand. Drilling capacity, in steel, up to 1 1/4". (With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1 1/8").

Reaming capacity, light, up to 1"; heavy, up to $\frac{3}{4}$ ".
No-load Speed (standard)..... 250 R.P.M.*
Net weight..... 32 lbs.
Overall length..... 20 $\frac{1}{2}$ "

Price, complete, specify voltage—(Code No. V-494)..... \$120.00
*Special No-load Speeds: 350, 600, 800, 900 R.P.M..... \$5.00 extra
Available for 110, 220 or 250 volts. Universal Motor.

Reversing switch for above drills..... \$10.00 extra

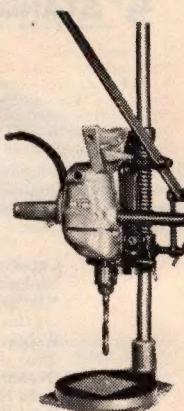
DRILL STANDS

Quickly adapt portable drills to drill press operations; for heavy duty and accurate work. Handle leverage permits tremendous pressure; bracket adjustable for height and lateral position; one bracket fits several tools and no adaptors are required.

Available in three types: Bench Stand for bench work; Post Stand for post or column mounting; Pedestal Stand for floor, as shown in large table below.

No. 23046 HORIZONTAL DRILL STANDS for current models of $\frac{1}{4}$ " Standard (End Handle), $\frac{1}{4}$ " H.D., $\frac{5}{16}$ " Utility, $\frac{5}{16}$ " H.D., $\frac{3}{8}$ " Standard, $\frac{3}{8}$ " Utility, $\frac{1}{2}$ " End Handle Drills, and Nos. 18 and 16 Gauge Shears..... \$2.75

No. 8169 HORIZONTAL DRILL STAND for $\frac{1}{4}$ " Junior Drills..... \$1.50



	FITS THESE UNITS	BENCH STAND		POST STAND		PEDESTAL STAND	
		Code	Price	Code	Price	Code	Price
No. 20 Stand	$\frac{1}{4}$ " Holgun $\frac{1}{4}$ " Junior $\frac{1}{4}$ " Standard $\frac{1}{4}$ " H.D. $\frac{5}{16}$ " H.D. $\frac{3}{8}$ " Standard #8 Serugun #8 Tapgun #12 Sc. Dr. #22 Sc. Dr. #22 Tapper	V-119	\$14.00	V-120	\$18.00		
No. 40 Stand	$\frac{3}{8}$ " H.D. $\frac{1}{2}$ " Junior $\frac{1}{2}$ " Standard	V-122	22.00	V-123	26.00	V-124	\$28.00
No. 60 Stand	$\frac{1}{2}$ " H.D. $\frac{5}{8}$ " Standard $\frac{5}{8}$ " H.D. $\frac{3}{8}$ " Standard $\frac{3}{4}$ " Standard $\frac{3}{4}$ " H.D. 1" H.D.	V-125	32.00	V-126	36.00	V-127	36.00
No. 80 Stand	1 1/4" Drill	V-495	45.00				

CHUCKS AND KEYS

Replacement geared chucks and chuck keys are available for all sizes and types of Electric Drills. Always give complete name-plate data when ordering. Replace lost keys promptly.



KEYLESS CHUCKS

Most $\frac{1}{4}$ " to $\frac{3}{8}$ " Drills may be equipped with Portomatic Keyless Chucks at small cost. Eliminate lost time and damage from lost keys.



CHUCKS ON MORSE TAPER ARBORS

$\frac{3}{8}$ " and $\frac{1}{2}$ " capacity geared chucks on proper size Morse Taper Arbors can be furnished for Drills equipped with M. T. Sockets.



FEED SCREWS

For applying heavy, steady pressure when drilling in awkward places. Adapted to $\frac{1}{2}$ " Heavy Duty and larger Drills.



AUXILIARY SIDE HANDLE

For end handle Drills and Screw Drivers, to provide accurate control and greater feed pressure.



All above attachments completely listed and priced in Master Catalog.

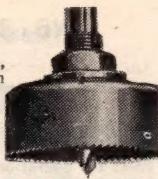


POWERFUL ELECTRIC TOOLS

"Van Dorn"

HOLE SAWS

Cut clean, round holes in steel, cast iron, sheet metal, wood or any material a hack saw will cut. Available in three types: fine-tooth for sheet metal, steel and all thin materials; coarse-tooth for cast iron, wood, fibre and all thick materials; both of highest quality tungsten steel, and a new HIGH-SPEED Hole Saw for hard alloys and production work.



SAW SIZE OUTSIDE DIAM.	FINE- TOOTH SAW CAT. NO.	COARSE- TOOTH SAW CAT. NO.	PRICE EACH (SAW ONLY WITHOUT MANDREL)	HIGH SPEED SAW	
				Cat. No.	Price
5/8"	23051		\$1.65**		
5/8"	16882†	14906†	.55	21747†	\$1.28
5/8"	16883†	14908†	.55	21748†	1.28
15/16"	21382†		.55	21749†	1.28
1"	16884†	14910†	.55	21771†	1.28
1 1/16"	21875†	22953†	.72	22809†	1.28
1 1/8"	16885†	14912†	.72	21772†	1.28
1 1/16"	17678†	17679†	.72	21773†	1.28
1 1/4"	16886†	14911†	.72	21781*	1.28
1 3/8"	16887†	14913*	.72	21782*	1.28
1 1/2"	16888*	14914*	.72	21783*	1.28
1 5/8"	16889*	14915*	.85	21784*	1.28
1 3/4"	16890*	14916*	.85	21785*	1.70
1 1/8"	16891†	14917*	.85	21786*	1.70
2"	16892†	14918*	1.02	21787†	1.70
2 1/16"	16893†	14919*	1.02	21788†	2.26
2 1/8"	16894†	14920†	1.02	21789†	2.26
2 1/4"	16895†	14922†	1.20	21790†	2.26
2 3/8"	16896†	14921†	1.20	21791†	2.26
2 1/2"	16897†	14923†	1.20	21792†	2.26
2 5/8"	16898†	14924†	1.28	21793†	2.26
2 3/4"	16899†	14925†	1.28	21794†	2.26
2 7/8"	16900†	14927†	1.28	21795†	2.26
3"	16901†	14926†	1.40	21796†	2.26
3 1/2"	16902†	14930†	1.40	21797†	2.26
3 3/4"	16903†	14929†	1.40	21798†	2.26
3 5/8"		24172†	1.40		
3 3/2"	16904†	14928†	1.40	21799†	2.26
3 5/8"		24173†	1.70		
3 3/4"		24174†	1.70		
3 1/2"		24175†	1.70		
4"	16905†	14932†	1.70	21800†	3.85

MANDRELS FOR 1/4", 3/16" AND 5/8" DRILLS

†22181 Mandrel with Pilot Drill (for 3/4" to 1 1/16" Saws).....	\$1.28
22182 Mandrel with Pilot Drill (for 1 1/4" to 1 1/2" Saws).....	1.28
22192 1 1/4" Pilot Drill, only for above mandrels.....	.30
23050 5/16" Pilot Drill (for 5/8" Hole Saw only).....	.30

*No. 23051 Hole Saw has a built-in Mandrel; no separate Mandrel supplied.

MANDRELS FOR 1/2" AND LARGER DRILLS

†14903 Mandrel with Pilot Drill (for 3/4" to 1 1/16" Saws).....	1.40
*14904 Mandrel with Pilot Drill (for 1 1/4" to 1 1/8" Saws).....	1.40
†18028 Mandrel with Pilot Drill (for 2" to 4" Saws).....	1.70
14935 1/4" Pilot Drill only, for above mandrels.....	.30

SPECIAL HOLE-SAWS

Special Tungsten Hole Saws, with extra-coarse tooth arrangement at 50c higher than standard prices up to 1 1/8", and "1.00 higher in 2" to 4" sizes. **SPECIAL DEPTH HOLE SAWS**—For home insulation and other uses requiring extra depth, the following special coarse-tooth Tungsten Hole Saws, with 1 1/4" depth-of-cut, and special Mandrel, are available.

No. 24576 2 1/2" Special Hole Saw.....	\$2.78
No. 18635 3" Special Hole Saw.....	2.78
No. 24578 Special Mandrel with pilot drill for above Hole Saws.....	1.70

RIGHT ANGLE DRILLING ATTACHMENT

Enables operator to reach out-of-the-way places in work on joists, etc. A handy attachment for all types of contracting jobs and electrical installations. Equipped with 3-jaw Geared Chuck, 1/2" capacity.

No. 23574 Right Angle Attachment for 1/2" Junior (B).....	\$30.00
No. 17819 Right Angle Attachment for 1/2" Standard and 1/2" Utility.....	30.00
No. 17820 Right Angle Attachment for 1/2" H.D. (A and B) and 5/8" Standard.....	30.00

WHEEL ARBORS

Adapt 1/4" and 1/2" Drills to light grinding and wire brushing, by holding wheels in chuck of drill. Body of arbor is 1/2" diameter and will take 3" and 4" wheels.

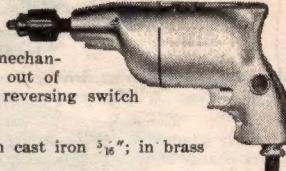
No. 3071 1/4" Drill Arbor (1/2" diam.; 1/4" shank).....	\$.85
No. 8449 1/2" Drill Arbor (1/2" diam.; 1/2" shank).....	1.75

SANDING PAD ARBOR

No. 23041 Arbor for 5" Sanding Pad; fits 1/4" H.D., 5/16" and 3/8" Drills (5/8"-11 thr., 1/4" shank).....	\$.50
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NO. 8 ELECTRIC TAPGUN

Fills the increasing demand for a lighter weight unit to handle portable tapping operations in small sizes on numerous assembly jobs. Has automatic reversing mechanism which automatically backs the tap out of the threaded hole at high speed. No reversing switch is needed.



Tapping capacity: In mild steel 5/16"; in cast iron 5/16"; in brass or aluminum 5/8".

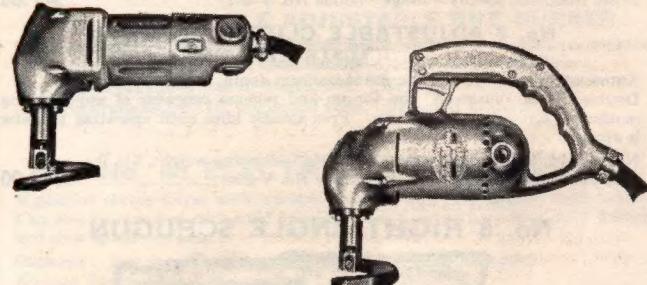
Speed: No-load.....	400 R.P.M.	Reversing.....	525 R.P.M.
Weight: Net.....	3 3/4 lbs.	Shipping.....	5 lbs.
Overall length.....			9 1/2"
Price, complete, specify voltage—(Code No. V-383).....			\$64.00
With special Tap-Holding Chuck Standard voltage 110; also available for 220 or 250 volts.			67.50
Universal Motor operates on A.C. or D.C.			

NO. 22 TAPPER

For industrial use where production tapping must be done on pieces too large or heavy to handle in a machine tapper. Especially adapted to installation and maintenance work on pipe lines, heating and lighting systems, steel shelving, partitions, etc. Threading holes in steel, cast iron, brass or aluminum. Universal motor operates on A.C. or D.C.

Tapping capacity.....	5/8" in cast iron; 1/4" in steel; 1/2" in brass
Speed: No-load.....	300 R.P.M.
Weight: Net.....	10 1/2 lbs.
Overall length.....	14 1/2 lbs.
Price, complete, specify voltage—(Code No. V-90).....	\$85.00
With special Tap-Holding Chuck	90.00
Special Speeds—500, 700 or 1200 R.P.M.	\$5.00 extra
Standard voltage 110; also available for 220 or 250 volts.	

ELECTRIC PORTO-SHEARS



Important engineering advancements have been made in both models of the famous and popular PORTO-SHEAR. The Porto-Shear will cut all types of sheet metal quickly, easily, and accurately. It is also used successfully for cutting thin sections of laminated wood and sheet plastics with slight changes in blade contours. Porto-Shear cuts to a 3/4" radius, and easily follows a straight or irregular pattern line—because the cutting blade is always visible. Both Shears easily cut to rated capacity in steel and galvanized iron; about one gage thinner in Monel and stainless; and 50% above rating in copper, aluminum, lead and other non-ferrous metals. Blades can be reground without special fixtures. Both units are full ball-bearing equipped (except eccentric) and powered by Universal motors.

No. 18 GAGE PORTO-SHEAR New housings of pressed steel have reduced the diameter, overall length and weight of this unit—greatly improving the operating balance and ease of handling. The housing serves as a "self-handle", eliminating the end handle. Power and capacity are equal to previous model.

No. 16 GAGE PORTO-SHEAR A new operating handle makes this larger, more powerful unit much easier to use. The handle contains an instant-release trigger switch, and may be held at any position, over-top to rear-end, for best balance and control. Power and capacity same as previous model.

No. 18 Gage Porto-Shear	No. 16 Gage Porto-Shear
Capacity, in steel, (U. S. Std.).....	18-gage
Cutting Speed, (Strokes per min.).....	2500
Minimum Cutting Radius.....	1 1/2"
Weight: Net.....	5 1/2 lbs.
Shipping.....	8 lbs.
Overall length.....	9 1/8"
Code No., (specify voltage).....	12 1/8"
Price, complete.....	V-258
	V-259
	\$60.00
	\$76.00

Available for 110, 220 or 250 volts. Universal Motors.

"Van Dorn" POWERFUL ELECTRIC TOOLS

NO. 3 TORSIMETER ADJUSTABLE CLUTCH SCREWDRIVER



Pre-adjusted to correct driving torsion; insures uniform results in production screw driving. A light, compact tool for small trim work, cabinet and airplane assembly.

Specially adapted to self-threading screws in light metal.

Quick-change chuck $\frac{1}{4}$ " hex. socket.

Capacity—Up to No. 4 Screws; No-load Speed, 1000 R.P.M.

No. 3 Torsimeter with paddle switch—(Code No. V-244), specify voltage..... \$55.00

Reversing switch..... \$7.50 extra

Net weight, 3 lbs.; overall length, $11\frac{1}{2}$ "; shipping weight, 4 lbs.

No. 8 SCRUGUN POSITIVE AND ADJUSTABLE CLUTCH SCREWDRIVERS



Extremely compact, highly versatile, surprisingly powerful; for production screwdriving in cabinet, trim, auto body and airplane assembly. Covers wide size range in machine screws, wood screws and self-tapping screws. Structural features same as HOLGUN.

Capacity: Wood screws—Up to No. 10 x 2"; Sel.-tapping Screws—Up to No. 12; Machine Screws and Nuts—Up to $\frac{1}{4}$ " diameter.

Standard spindle Speed—(No-load), 750 R.P.M.

Optional Speeds—(No extra cost), 500, 1000, 1500 R.P.M.

Equipped with quick-change chuck, $\frac{1}{4}$ " hex. socket.

No. 8 POSITIVE CLUTCH SCRUGUN

Has positive-type clutch which permits free spindle to idle until bit "finds" screw slot.

Net weight, $3\frac{1}{2}$ lbs.; overall length, $8\frac{3}{4}$ "; shipping weight, $4\frac{3}{4}$ lbs.

Price, complete, specify voltage—(Code No. V-402)..... \$47.00

No. 8 ADJUSTABLE CLUTCH SCRUGUN (ILLUSTRATED)

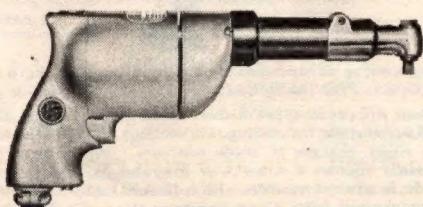
Automatically drives every screw to uniform depth.

Double clutch "cushions" the torque and relieves operator of any twisting motion as screw is driven home. Free spindle idles until operating pressure is applied.

Net weight, $3\frac{3}{4}$ lbs.; overall length, $10\frac{1}{4}$ "; shipping weight, $5\frac{1}{4}$ lbs.

Price, complete, specify voltage—(Code No. V-350)..... \$57.00

No. 8 RIGHT-ANGLE SCRUGUN



By adding the advantages of the right-angle drive to the No. 8 Scrugun, "corner" work, limited clearance and other obstacles to the efficient use of the straight-drive unit are overcome. See master catalog for available heads.

Capacity: Machine screws and nuts, up to $\frac{1}{4}$ " diameter; Self-tapping screws, up to No. 12.

No-load Speed, 500 R.P.M.*

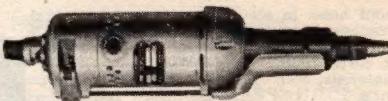
	Standard Unit	Bonnet† Grip	Paddle† Switch
Weight: Net.....	$4\frac{1}{2}$ lbs.	$5\frac{1}{4}$ lbs.	$5\frac{1}{4}$ lbs.
Shipping.....	6 lbs.	7 lbs.	7 lbs.
Overall length.....	$10\frac{3}{4}$ "	$14\frac{1}{8}$ "	$14\frac{1}{8}$ "
Code No.	V-374	V-390	V-391
Price, complete with one head—			
No. 100 to 108 Heads.....	\$77.00	\$77.00	\$80.00
No. 150 to 152 Heads.....	85.00	85.00	88.00
No. 156 Head.....	97.00	97.00	100.00
Reversing Switch—Paddle Switch and Bonnet Grip units only.....			\$7.50

*Optional Speeds (no extra charge)—350, 750 or 1000 R.P.M.

†These units similar to Center-Drive Scrugun.

Ask for a copy of "POWER ASSEMBLY TOOLS HANDBOOK"

No. 8 CENTER-DRIVE SCRUGUN



Ideal for operation in suspended position. Center spindle improves "aim"; bonnet grip or paddle switch arrangements eliminate handles; operates in reverse at full power when equipped with reversing switch.

Net weight, $4\frac{3}{4}$ lbs.; overall length, $13\frac{1}{4}$ ", shipping weight, 6 lbs.

Other specifications same as No. 8 Scrugun.

Price, 8-CD Adjustable Clutch Scrugun—with Bonnet Grip—(Code No. V-380)..... \$57.00

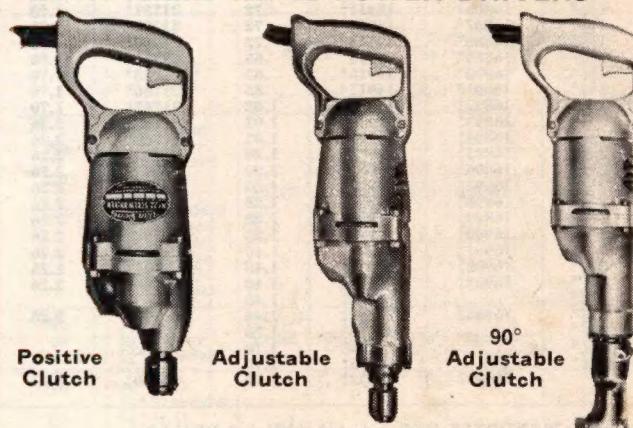
With Paddle Switch—(Code No. V-381)..... 60.00

Price, 8-CP Positive Clutch Scrugun—with Bonnet Grip—(Code No. V-403)..... 47.00

With Paddle Switch—(Code No. V-404)..... 50.00

Reversing Switch for No. 8 Center Drive Scruguns..... \$7.50

No. 12 and No. 22 POWER DRIVERS



Nos. 12 and 22 Power Drivers are capable of constant production in screw driving operations in metal or wood, nut tightening, boat building, body work, assembling and crating. Have $\frac{7}{16}$ " hex. socket chuck and can be equipped with reversing switch for disassembly work.

No. 30426 Auxiliary Side Handle for No. 12 Power Drivers..... \$2.75 extra

No. 30427 Auxiliary Side Handle for No. 22 Power Drivers..... \$2.75 extra

Capacities:

Wood Screws.....	No. 12	No. 22
$14 \times 2\frac{1}{2}$ "	$14 \times 2\frac{1}{2}$ "	$18 \times 3\frac{1}{2}$ "
$\frac{5}{8}$ " Dia.	$\frac{5}{8}$ " Dia.	$\frac{3}{8}$ " Dia.
Lag Screws.....	$\frac{1}{4}$ " x 2"	$\frac{5}{16}$ " x 3"
Machine Screws and Nut.....	$\frac{3}{8}$ " Dia.	$\frac{1}{2}$ " Dia.

Standard Voltage—110; also available for 220 or 250 volts. Universal Motors.

Standard No-load Speed 500 R.P.M.*

No. 12 POSITIVE CLUTCH DRIVER

Pin-type clutch permits spindle to idle until bit finds screw slot. Throws out when operating pressure is released.

Net weight, $6\frac{3}{4}$ lbs.; overall length, $13\frac{1}{4}$ ", shipping weight, 9 lbs.

Price, complete, specify voltage—(Code No. V-53)..... \$58.00

*Special Speeds—750, 1000 or 1600 R.P.M..... \$2.50 extra

No. 12 ADJUSTABLE CLUTCH DRIVER

Adjustable clutch adapts driving torque to specific operation, insuring uniform results. Spindle idles until operating pressure is applied.

Net weight, 8 lbs.; overall length, $15\frac{1}{2}$ "; shipping weight, 12 lbs.

Price, complete, specify voltage—(Code No. V-169)..... \$68.00

*Special Speeds—750, 1000 or 1600 R.P.M..... \$2.50 extra

No. 12—90° ANGLE ADJUSTABLE DRIVER

Several 90° angle heads with various shanks or sockets, and adjustable clutch feature adapt this unit to many special assembly operations in hard-to-reach places. See Master Catalog for available heads, and code numbers.

Net weight, $9\frac{1}{2}$ lbs.; overall length, $18\frac{1}{4}$ ", shipping weight, 13 lbs.

Price, complete, with one head—(except 305), specify voltage..... \$93.00

With No. 305 Head..... 103.00

*Special Speeds—350 or 700 R.P.M..... \$2.50 extra

Reversing Switch for all No. 12 Drivers..... \$7.50 extra

No. 22 POWER DRIVERS ON NEXT PAGE

STANDARD VOLTAGE ON ABOVE UNITS—110; -220, 250 Volts also available, Universal Motors



POWERFUL ELECTRIC TOOLS

"Van Dorn"

POWER DRIVERS (Continued)

No. 22 POSITIVE CLUTCH DRIVER

Positive clutch permits spindle to idle until operating pressure engages clutch jaws. Kicks out when pressure is released.

Net weight, 9 lbs.; overall length, 14 $\frac{1}{4}$ "; shipping weight, 11 $\frac{1}{4}$ lbs.
Price, complete, specify voltage—(Code No. V-54) \$72.00
*Special Speeds—750, 1000 or 1600 R.P.M. \$2.50 extra

No. 22 ADJUSTABLE CLUTCH DRIVER

Selectivity of adjustable clutch and power of this unit ideal for tough production work. Clutch automatically releases each screw at uniform depth. Spindle idles until pressure is applied.

Net weight, 10 $\frac{1}{2}$ lbs.; overall length, 17 $\frac{1}{4}$ "; shipping weight, 16 lbs.
Price, complete, specify voltage—(Code No. V-164) \$85.00
*Special Speeds—750, 1000 or 1600 R.P.M. \$2.50 extra

No. 22—90° ANGLE ADJUSTABLE DRIVER

Limited clearance, corner work and other obstacles to production screw driving and nut running are overcome by the various 90° angle heads and adjustable clutch. Several interchangeable heads, with various shanks or sockets. See Master Catalog for Head Specifications and Code Numbers.

Net weight, 12 lbs.; overall length, 19 $\frac{5}{8}$ "; shipping weight, 18 lbs.
Price, specify voltage, with one right-angle head (except 305) \$110.00
With No. 305 Head 120.00
*Special Speeds—350 or 700 R.P.M. \$2.50 extra
Reversing Switch for all No. 22 Drivers \$7.50 extra

No. 32 ELECTRIC NUT RUNNER

POSITIVE, ADJUSTABLE AND 90° ANGLE



The pin-type clutch in the spindle of the Positive unit automatically disengages when driving pressure is released. In the Adjustable unit the clutch automatically releases each screw at the same torsion point, assuring uniform results. Free spindle idles until operating pressure engages the clutch jaws. Adjustment of tension is quickly made.

For heavy duty screw driving and production assembly nut tightening. Has quick-change chuck with $\frac{5}{8}$ " hex. socket. Can be equipped with reversing switch. End switch handle is optional at no extra cost.

Capacity: Machine screws and nuts— $\frac{5}{8}$ " diameter; lag screws—up to $\frac{5}{8}$ " x 4 $\frac{1}{2}$ " long.
Standard No-load speed, 500 R.P.M.
Special Speeds—350, 700 or 900 R.P.M. \$5.00 extra
Reversing Switch. \$10.00 extra

No. 32 POSITIVE CLUTCH NUT RUNNER

(Illustrated)

With Side Switch Handle—(Code No. V-55) \$104.00
With End Switch Handle—(Code No. V-392) 104.00
Net weight, 21 $\frac{1}{4}$ lbs.; overall length, 20 $\frac{5}{8}$ "; shipping weight 28 $\frac{1}{2}$ lbs.

No. 32 ADJUSTABLE CLUTCH NUT RUNNER

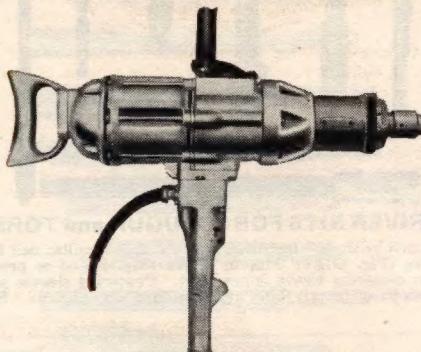
With Side Switch Handle—(Code No. V-352) \$120.00
With End Switch Handle—(Code No. V-373) 120.00
Net weight 27 lbs.; overall length, 21 $\frac{1}{8}$ "; shipping weight, 29 lbs.

No. 32—90° ANGLE ADJUSTABLE NUT RUNNER

Can be equipped with any of 4 driving heads with various shanks or sockets. See Master Catalog for Head specifications and Code Numbers.
Net weight, 28 $\frac{1}{2}$ lbs.; overall length, 24 $\frac{1}{2}$ "; shipping weight, 38 lbs.
Price, specify voltage, with any one right-angle head \$160.00
All units above available for 110, 220 or 250 volts. Universal Motors.

No. 42 ELECTRIC NUT RUNNER

POSITIVE, ADJUSTABLE AND 90° ANGLE



The most powerful unit for production assembly work. Equipped with quick-change chuck with $\frac{5}{8}$ " hex. socket. Can be equipped with reversing switch. Right angle unit can be had with end switch handle instead of side switch and spade handle, no extra cost.

Capacity: Machine screws and nuts—up to $\frac{5}{8}$ " diameter; lag screws—up to $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " long.
Standard No-load Speed, 500 R.P.M.
Special Speeds—350, 700 or 900 R.P.M. \$5.00 extra
Reversing Switch. \$10.00 extra

No. 42 POSITIVE CLUTCH NUT RUNNER

Net weight, 35 lbs.; overall length, 21 $\frac{1}{4}$ "; shipping weight 43 lbs.
(Code No. V-56) \$130.00

No. 42 ADJUSTABLE CLUTCH NUT RUNNER

(Illustrated)

Net weight, 47 $\frac{1}{2}$ lbs.; overall length, 26 $\frac{3}{8}$ "; shipping weight, 57 lbs.
(Code No. V-358) \$155.00

No. 42—90° ANGLE ADJUSTABLE NUT RUNNER

Can be equipped with either of 2 driving heads, with various shanks or sockets. See Master Catalog for Head specifications, Code Numbers and Prices.
Net weight, 52 $\frac{1}{2}$ lbs.; overall length, 28 $\frac{3}{4}$ "; shipping weight, 65 lbs.
All units available for 110, 220 or 250 volts. Universal Motors.

No. 43 ELECTRIC NUT RUNNER

A positive clutch driver with low spindle speed and exceptionally high torque. Can also be supplied with solid spindle and $\frac{3}{4}$ " chuck for heavy duty drilling and slow speed reaming.

Capacity: Lag screws— $\frac{3}{8}$ " x 6"; nuts and bolts—1" diameter.
No-load Speed, 90 R.P.M.
Special Speeds—175 or 275 R.P.M. \$5.00 extra
Net weight, 30 $\frac{1}{2}$ lbs.; overall length, 22 $\frac{3}{4}$ ", shipping weight, 39 $\frac{1}{4}$ lbs.
Price, with quick-change chuck, $\frac{5}{8}$ " hex. socket—(Code No. V-245) \$130.00
Price, with solid spindle and $\frac{3}{4}$ " Jacobs chuck and key. 145.00
Available for 110, 220 or 250 volts. Universal Motor.

SCREW DRIVER BITS FOR PHILLIPS HEAD SCREWS FOR SCRUGUN, TORSIMETER, 12 AND 22 POWER DRIVERS



A special bit is required for driving the Phillips head screw, which has a cross form slot instead of the conventional slot and four different slot sizes designated as Nos. 1, 2, 3 and 4.

SLOT SIZE	CAT. NO.	UNIT USED WITH	PRICE EACH	PRICE EACH LOT OF 6**
No. 1*	17922	Torsimeter and Serugun	.64	.60
No. 1†	18938	Nos. 12 and 22 P.D.	.85	.80
No. 2*	17923	Torsimeter and Serugun	.64	.60
No. 2†	17924	Nos. 12 and 22 P.D.	.85	.80
No. 3*	21366	Torsimeter and Serugun	.64	.60
No. 3†	17925	Nos. 12 and 22 P.D.	.85	.80
No. 4†	17926	Nos. 12 and 22 P.D.	.85	.80

* $\frac{1}{4}$ " hex. shank.

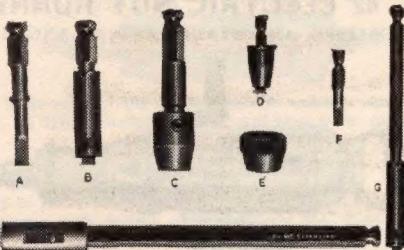
† $\frac{7}{16}$ " hex. shank.

**Quantity prices apply only on designated quantities, all of one size.

STANDARD SCREW DRIVER BITS ON NEXT PAGE

"Van Dorn" POWERFUL ELECTRIC TOOLS

STANDARD SCREW DRIVER BITS



SCREW DRIVER BITS FOR SCRUGUN and TORSIMETER

Bits are equipped with $\frac{1}{4}$ " hex. shank to fit above units; can be used with centering sleeve (Fig. D), or without sleeve (Fig. F). Use protector sleeve (Fig. E), when centering sleeve is not used. Centering sleeves and protector sleeves for standard length bits are standard equipment. Replacements available.

SCREW SIZE	CAT. NO. OF BIT	LENGTH OF BIT	FINDER	PRICE EACH	
				Each	In Box of 6*
No. 2, 3 Wood	18051 22396	$1\frac{1}{4}$ " $2\frac{3}{4}$ "	without without	\$.64 .85	\$.47 .60
	13208 17688	$1\frac{1}{4}$ " $2\frac{3}{4}$ "	without without	.64 .85	.47 .60
No. 4-7 Wood	17690 22108 22111	$2\frac{3}{4}$ " $5\frac{1}{4}$ " $5\frac{1}{4}$ "	with without with	1.28 .94 1.37	.90 .66 .96
	13207 13353 13356 13470 13469	$1\frac{1}{4}$ " $2\frac{3}{4}$ " $2\frac{3}{4}$ " $5\frac{1}{4}$ " $5\frac{1}{4}$ "	without without with without with	.64 .85 1.28 .94 1.37	.47 .60 .90 .66 .96
No. 8, 9 Wood	15475 23494 18594 18593	$1\frac{1}{4}$ " $2\frac{3}{4}$ " $2\frac{3}{4}$ " $2\frac{3}{4}$ "	without without without with	.64 .85 .85 1.28	.47 .60 .60 .90
No. 10, 11 Wood	16772 21730 21731	$1\frac{1}{4}$ " $2\frac{3}{4}$ " $2\frac{3}{4}$ "	without without with	.64 .85 1.28	.47 .60 .90
No. 12 Wood					

SCREW DRIVER BITS FOR No. 12 and No. 22 POWER DRIVERS

Standard Bits (Fig. A) are equipped with $\frac{1}{16}$ " hexagon shanks to fit chucks of the above units, and are available in nine sizes to drive screws from No. 4 to No. 20. All standard bits can be equipped with centering sleeves (Fig. B) which guide the bit into the screw slot. Various length shanks are available for special operations. Lengths indicated are projecting lengths, from chuck to end of bit, not overall lengths.

CATALOG NUMBERS OF BITS WITHOUT FINDERS

SCREW SIZES	LENGTH OF BIT				
	$2\frac{1}{2}$ "	4"	6"	8"	10"
No. 4-7 Wood	5104	15049	15050	15051	15052
No. 8, 9 Wood	5106	15053	15054	15055	15056
No. 10, 11 Wood	5108	15057	15058	15059	15060
No. 12 Wood	5110	15061	15062	15063	15064
No. 14 Wood	5112	15065	15066	15067	15068
No. 16 Wood	5114	15069	15070	15071	15072
No. 18 Wood	5116†	15073	15074	15075	15076
No. 20 Wood	5118‡	15077	15078	15079	15080
No. 24 Wood	5120‡	15081	15082	15083	15084
Price each	\$.85	\$1.02	\$1.10	\$1.20	\$1.28
Each, Box of 6*	.60	.72	.78	.84	.90

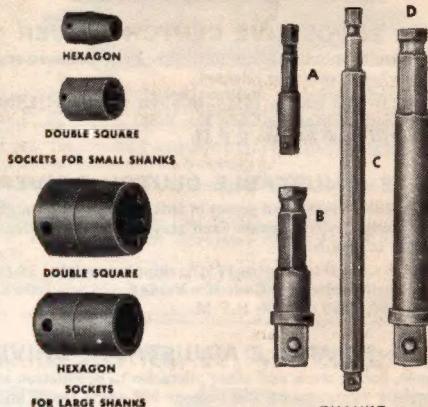
+ $2\frac{3}{8}$ " long. ‡ $2\frac{3}{4}$ " long.

CATALOG NUMBERS OF BITS WITH FINDERS

SCREW SIZES	LENGTH OF BIT				
	$2\frac{1}{2}$ "	4"	6"	8"	10"
No. 4-7 Wood	5345	15085	15086	15087	15088
No. 8, 9 Wood	5346	15089	15090	15091	15092
No. 10, 11 Wood	5330	15093	15094	15095	15096
No. 12 Wood	5343	15097	15098	15099	15100
No. 14 Wood	5344	15101	15102	15103	15104
No. 16 Wood	5329	15105	15106	15107	15108
No. 18 Wood	5364†	15109	15110	15111	15112
No. 20 Wood	5366‡	15113	15114	15115	15116
No. 24 Wood	5369‡	15117	15118	15119	15120
Price each	\$1.28	\$1.45	\$1.54	\$1.62	\$1.70
Each, Box of 6*	.90	1.02	1.08	1.14	1.20

+ $2\frac{3}{8}$ " long. ‡ $2\frac{3}{4}$ " long.

SOCKET WRENCHES—SHANKS



SOCKET WRENCHES

SIZE SOCKET	DRIVE OPENING	CAT. NO. HEX. SOCKET	PRICE EACH	CAT. NO. DOUBLE Sq.	PRICE EACH
$\frac{1}{4}$ "	$\frac{1}{4}$ "	20512	\$.70	20519	\$.85
$\frac{5}{16}$ "	$\frac{5}{16}$ "	20513	.70	20520	.85
$\frac{3}{8}$ "	$\frac{3}{8}$ "	20514	.70	20521	.85
$\frac{11}{16}$ "	$\frac{11}{16}$ "	20515	.70	20522	.85
$\frac{3}{4}$ "	$\frac{3}{4}$ "	20516	.70	20546	.85
$\frac{15}{16}$ "	$\frac{15}{16}$ "	20517	.70	22915	.90
$\frac{1}{2}$ "	$\frac{1}{2}$ "	20518	.75	22916	.95
$\frac{17}{16}$ "	$\frac{17}{16}$ "	22917	.80		
$\frac{3}{2}$ "	$\frac{3}{2}$ "	22762	.75	22763	1.00
$\frac{19}{16}$ "	$\frac{19}{16}$ "	22764	.75	22765	1.00
$\frac{5}{8}$ "	$\frac{5}{8}$ "	22766	.75	22767	1.00
$\frac{7}{8}$ "	$\frac{7}{8}$ "	22768	.75	22769	1.00
$\frac{9}{8}$ "	$\frac{9}{8}$ "	22770	.75	22771	1.00
$\frac{11}{8}$ "	$\frac{11}{8}$ "	22772	.75	22773	1.00
$\frac{13}{8}$ "	$\frac{13}{8}$ "	22774	.75	22775	1.00
$\frac{15}{8}$ "	$\frac{15}{8}$ "	22776	.75	22777	1.00
$\frac{17}{8}$ "	$\frac{17}{8}$ "	22778	1.00	22779	1.30
$\frac{19}{8}$ "	$\frac{19}{8}$ "	22780	1.00	22781	1.30
$\frac{21}{8}$ "	$\frac{21}{8}$ "	22782	1.00	22783	1.50
$\frac{23}{8}$ "	$\frac{23}{8}$ "	22784	1.25	22785	1.60
$\frac{25}{8}$ "	$\frac{25}{8}$ "	22786	1.35	22787	1.75
$\frac{27}{8}$ "	$\frac{27}{8}$ "	22788	2.00	22789	2.50
$\frac{29}{8}$ "	$\frac{29}{8}$ "	22790	2.25	22791	2.75
$\frac{31}{8}$ "	$\frac{31}{8}$ "	23298	3.50	23297	5.50
$\frac{33}{8}$ "	$\frac{33}{8}$ "	23300	3.50	23299	5.50
$\frac{35}{8}$ "	$\frac{35}{8}$ "	23302	4.00	23301	6.00
$\frac{37}{8}$ "	$\frac{37}{8}$ "	23304	4.50	23303	6.50
$\frac{39}{8}$ "	$\frac{39}{8}$ "	23306	5.00	23305	7.00
$\frac{41}{8}$ "	$\frac{41}{8}$ "	23308	5.00	23307	7.00
$\frac{43}{8}$ "	$\frac{43}{8}$ "	25943	5.50		

Special sizes quoted on request.

SHANKS

SIZE Sq. DRIVE	SIZE HEX. END	OVERALL LENGTH	CATALOG NUMBER	PRICE EACH
$\frac{1}{4}$ "	$\frac{1}{4}$ "	2"	20510	\$1.00
$\frac{5}{16}$ "	$\frac{5}{16}$ "	6"	20511	1.50
$\frac{3}{8}$ "	$\frac{3}{8}$ "	$2\frac{3}{4}$ "	22792	1.50
$\frac{7}{16}$ "	$\frac{7}{16}$ "	5"	22793	1.85
$\frac{1}{2}$ "	$\frac{1}{2}$ "	$2\frac{3}{4}$ "	22794	2.00
$\frac{5}{8}$ "	$\frac{5}{8}$ "	5"	22795	2.25
$\frac{7}{8}$ "	$\frac{7}{8}$ "	3"	22796	2.25
$\frac{9}{8}$ "	$\frac{9}{8}$ "	5"	22797	2.50
$\frac{11}{8}$ "	$\frac{11}{8}$ "	3"	22798	2.75
$\frac{13}{8}$ "	$\frac{13}{8}$ "	5"	22799	3.00

BIT EXTENSIONS

Screw Driver Bit Extensions are available in various lengths, with $\frac{1}{4}$ " or $\frac{3}{8}$ " shank to fit Torsimeter, Scrugun or Power Driver Chuck, and a chuck socket to take standard bits and socket wrenches. These Extensions greatly reduce bit replacement costs, where long bits are needed.

LENGTH OF EXT.	CATALOG NUMBER	PRICE EACH	BOX OF 6, EACH*
4"	22581	\$1.25	.....
6"	22539	1.25	.....
8"	22540	1.30	.....
10"	22323	1.30	.....
4"	15023	1.15	\$.98
6"	14989	1.25	1.06
8"	5287	1.35	1.15
10"	5288	1.50	1.28

*Quantity prices apply only on designated quantities, all of one size.

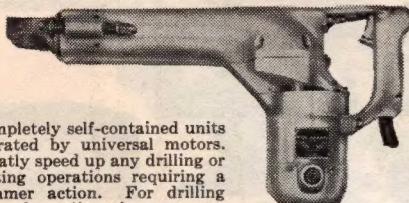


"Van Dorn"

POWERFUL ELECTRIC TOOLS

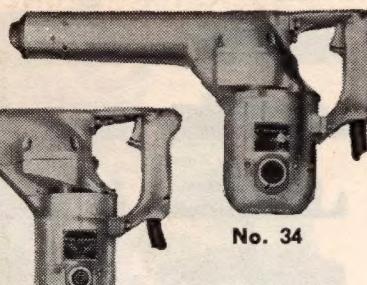
PORTABLE ELECTRIC HAMMERS

No. 36



Completely self-contained units operated by universal motors. Greatly speed up any drilling or cutting operations requiring a hammer action. For drilling and channeling in concrete, stone or brick. Removing form marks from concrete surfaces. Caulking joints and seams in tanks, pipe lines, etc. Removing scale in boilers, tanks, etc.

No. 34



No. 30 PORTABLE ELECTRIC HAMMER

Efficient operating range.....	$\frac{3}{16}$ " to $\frac{1}{2}$ "	
Number of blows per minute.....	2400	
Weight: Net.....	5 $\frac{3}{4}$ lbs. Shipping.....	15 lbs.
Overall length.....	12 $\frac{1}{2}$ "	
Price, complete, specify voltage—(Code No. V-102).....	\$85.00	

No. 32 PORTABLE ELECTRIC HAMMER

Efficient operating range.....	$\frac{1}{4}$ " to $\frac{3}{4}$ "	
Number of blows per minute.....	2300	
Weight: Net.....	10 $\frac{3}{4}$ lbs. Shipping.....	22 lbs.
Overall length.....	14 $\frac{1}{2}$ "	
Price, complete, specify voltage—(Code No. V-103).....	\$115.00	

No. 34 PORTABLE ELECTRIC HAMMER

Efficient operating range.....	$\frac{3}{4}$ " to $1\frac{1}{8}$ "	
Number of blows per minute.....	2200	
Weight: Net.....	19 $\frac{1}{4}$ lbs. Shipping.....	31 lbs.
Overall length.....	18 $\frac{1}{4}$ "	
Price, complete, specify voltage—(Code No. V-104).....	\$145.00	

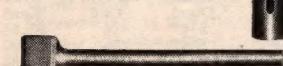
No. 36 PORTABLE ELECTRIC HAMMER

Efficient operating range.....	$1\frac{1}{4}$ " to 2 "	
Number of blows per minute.....	1950	
Weight: Net.....	29 $\frac{1}{4}$ lbs. Shipping.....	44 lbs.
Overall length.....	20 $\frac{1}{2}$ "	
Price, complete, specify voltage—(Code No. V-105).....	\$195.00	

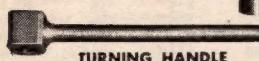
Standard voltage 110; also available for 220 or 250 volts.
Universal Motors operate on A.C. or D.C.



DUST SHIELD



CHUCK WRENCH



TURNING HANDLE



TOOL RETAINING SPRING

DRIFT KEY

HAMMER ACCESSORIES

Hammer Lubricating Oil

22926 3 oz. Can.....	\$.25
22930 Pint Container.....	.50
22931 Quart Container.....	.85
22932 Gallon Container.....	2.50

Carrying Cases

18296 for No. 30.....	\$ 7.75
18389 for No. 32.....	9.00
21003 for No. 34.....	10.00
18679 for No. 36.....	12.50

Chuck Wrench-Turn Handle

For complete data on use see Master Catalog.

22587	Chuck Wrench	\$3.85
23806	Chuck Wrench	3.85
22749	Chuck Wrench	4.25
22754	Chuck Wrench	5.00
22510	Chuck Only	5.00
21726	Turning Handle	2.00

DRIFT KEY

Used to remove taper-shank bits from socket of Chuck Wrench.
Cat. No. 7276, for all Chuck Wrenches..... \$.35

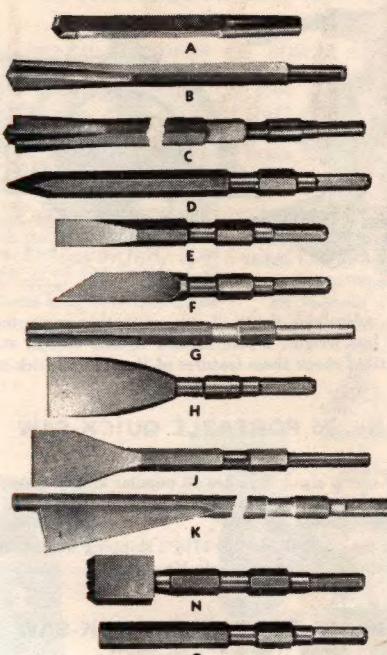
TOOL RETAINING SPRINGS

To hold straight-shank tools in nose piece of Hammer.
Cat. No. 10909, for Nos. 30 and 32 Hammers..... .15
Cat. No. 21750, for No. 34 Hammer..... .15

DUST SHIELDS

Used in over-head drilling to prevent dust from entering nose piece and mechanism of Hammer.
Cat. No. 17746, for Chuck Wrenches Nos. 22587, 23806 and 22510..... \$.35
Cat. No. 17747, for Chuck Wrenches Nos. 22749 and 22754..... .35

HAMMER TOOLS



STAR DRILLS (B and C)

Cat. No.	Size	Price	Cat. No.	Size	Price
7167	$\frac{1}{4}$ " x 5"	.60	23453	$\frac{3}{16}$ " x 3"	*\$5.40
7168	$\frac{3}{16}$ " x 5"	.65	11363	$\frac{1}{4}$ " x 3 $\frac{1}{2}$ "	* 5.40
7160	$\frac{5}{16}$ " x 5"	.65	11364	$\frac{5}{16}$ " x 3 $\frac{3}{4}$ "	* 6.00
7169	$\frac{7}{16}$ " x 5"	.70	11365	$\frac{3}{8}$ " x 4"	* 6.00
7161	$\frac{1}{2}$ " x 9"	.70	11366	$\frac{7}{16}$ " x 4 $\frac{1}{2}$ "	* 6.60
9364	$\frac{1}{2}$ " x 18"	.85	24024	$\frac{1}{2}$ " x 5"	* 6.60
7170	$\frac{9}{16}$ " x 9"	.75	11367	$\frac{1}{2}$ " x 9"	* 7.20
7162	$\frac{5}{8}$ " x 9"	.75	24025	$\frac{9}{16}$ " x 5"	* 7.20
9372	$\frac{7}{8}$ " x 18"	.90	11368	$\frac{3}{16}$ " x 9"	* 7.80
7171	$\frac{11}{16}$ " x 9"	.80	24026	$\frac{5}{8}$ " x 5"	* 7.20
7163	$\frac{3}{4}$ " x 9"	.80	11369	$\frac{5}{8}$ " x 9"	* 7.80
9380	$\frac{3}{4}$ " x 18"	1.00			
9382	$\frac{3}{4}$ " x 24"	1.25			
24673	$\frac{11}{16}$ " x 9"	.80			
23081	$\frac{3}{4}$ " x 9"	.80			
23082	$\frac{3}{4}$ " x 18"	1.00			
23083	$\frac{3}{4}$ " x 24"	1.25			
7172	$\frac{13}{16}$ " x 9"	.90			
7097	$\frac{7}{8}$ " x 9"	.90			
9388	$\frac{7}{8}$ " x 18"	1.25			
9390	$\frac{15}{16}$ " x 24"	1.50			
7173	$\frac{15}{16}$ " x 9"	1.00			
7096	1" x 9"	1.00			
9396	1" x 18"	1.50			
9398	1" x 24"	1.75			
10751	$\frac{11}{16}$ " x 12"	1.25			
10981	$\frac{11}{16}$ " x 24"	2.00			
21942	$\frac{1}{4}$ " x 12"	1.75			
21943	$\frac{1}{4}$ " x 24"	2.75			
21944	$\frac{1}{8}$ " x 18"	2.00			
21945	$\frac{1}{8}$ " x 30"	3.00			
21946	$\frac{1}{2}$ " x 18"	2.25			
21947	$\frac{1}{2}$ " x 30"	3.25			
21948	$\frac{13}{16}$ " x 18"	2.75			
21949	$\frac{13}{16}$ " x 30"	3.75			
21950	2" x 18"	3.50			
21951	2" x 30"	4.50			

SPEED BITS (A)

Cat. No.	Size	Price
23446	$\frac{3}{16}$ " x 3"	2.15
17314	$\frac{1}{4}$ " x 9"	2.25
17315	$\frac{1}{2}$ " x 9"	2.35
12401	$1\frac{1}{2}$ " x 12"	2.40
22886	$2\frac{1}{2}$ " x 12"	2.50
22887	$2\frac{1}{2}$ " x 12"	4.25

COLD CHISELS (J)

Cat. No.	Size	Price
12446	$1\frac{1}{4}$ " x 9"	2.15
17314	$1\frac{1}{2}$ " x 9"	2.25
17315	$2\frac{1}{2}$ " x 9"	2.35
12401	$1\frac{1}{2}$ " x 12"	2.40
22886	$2\frac{1}{2}$ " x 12"	2.50
22887	$2\frac{1}{2}$ " x 12"	4.25

FLAT WOOD CHISEL (H)

Cat. No.	Size	Price
9039	2" x 9"	3.00

MISCELLANEOUS HAMMER TOOLS

11107	7"	Tool Bank (O)	\$1.15
7267	8"	Tool Bank (O)	1.25
17232	9"	Seam Tool (F)	2.35
9035	9"	Seam Tool (F)	
23804	10"	Bull Point (D)	1.65
23805	18"	Bull Point (D)	2.30
9036	12"	Bull Point (D)	1.80
9410	20"	Bull Point (D)	2.50
11624	8"	Bushing Tool (N)	6.25
9040	9"	Bushing Tool (N)	6.25
10684	9"	Bushing Tool Head Only	4.75
17335	9"	4-Point Scaling Tool (G)	2.25
20859	19"	Web Cutting Tool (K)	6.75

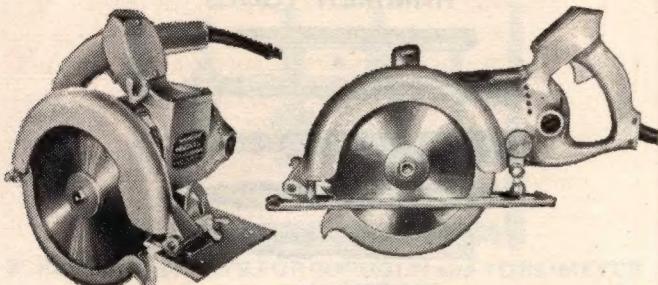
Ask for Hammer Handbook, for complete information on construction, operation, and applications of Van Dorn Hammers.

"Van Dorn"



POWERFUL ELECTRIC TOOLS

PORTRABLE ELECTRIC QUICK-SAWS



Complete safety, adjustable depth of cut, adjustable angle; increased power, perfect balance, less weight, 2-pole instant release switch, sturdy gear and bearing construction; check these features of Van Dorn Quick-Saws.

No. 75 PORTABLE QUICK-SAW

(Depth of Cut— $2\frac{3}{8}$ "")

The most widely useful size. Handles all popular lumber sizes. Diameter Saw Blade, $7\frac{1}{4}$ "; No-load Speed, 3200 R.P.M. Maximum vertical depth of cut, $2\frac{3}{8}$ ". Net weight, $18\frac{3}{4}$ lbs.; overall length, $17\frac{1}{2}$ "; shipping weight, 38 lbs. Price, complete, specify voltage—(Code No. V-260)..... \$105.00

No. 85 PORTABLE QUICK-SAW

(Depth of Cut— $2\frac{3}{8}$ "")

Especially adapted for quick cut-off work; well balanced for one-hand operation. Diameter Saw Blade, $8\frac{1}{8}$ "; No-load Speed, 5000 R.P.M. Maximum vertical depth of cut, $2\frac{3}{8}$ ". Net weight, $20\frac{1}{4}$ lbs.; overall length, $13\frac{1}{4}$ "; shipping weight, 45 lbs. Price, complete, specify voltage—(Code No. V-382)..... \$122.00

No. 95 PORTABLE QUICK-SAW

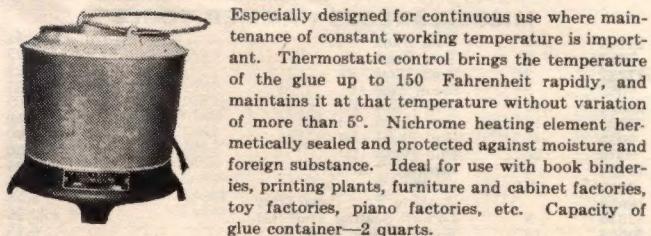
(Depth of Cut— $3\frac{1}{8}$ "")

A popular large size unit for work requiring greater depth of cut. Diameter Saw Blade, $9\frac{1}{4}$ "; No-load Speed, 2500 R.P.M. Maximum vertical depth of cut, $3\frac{1}{8}$ ". Net weight, 26 lbs.; overall length, $19\frac{1}{4}$ "; shipping weight, 54 lbs. Price, complete, specify voltage—(Code No. V-375)..... \$140.00

STANDARD EQUIPMENT: (all units) 3-wire cable and plug, Combination Rip and Cross Cut Blade, Carrying Case. Universal Motors, operate on A.C. or D.C. Standard Voltage, 110; also available for 220 or 250 volts.

Ask for copy of "SAW HANDBOOK" containing many suggestions for use and care of Quick-Saws.

GLUE POT

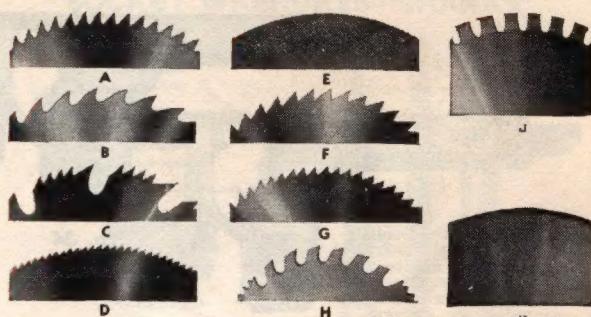


Especially designed for continuous use where maintenance of constant working temperature is important. Thermostatic control brings the temperature of the glue up to 150 Fahrenheit rapidly, and maintains it at that temperature without variation of more than 5° . Nichrome heating element hermetically sealed and protected against moisture and foreign substance. Ideal for use with book binderies, printing plants, furniture and cabinet factories, toy factories, piano factories, etc. Capacity of glue container—2 quarts.

Weight: Net..... $14\frac{1}{2}$ lbs. Shipping..... 16 lbs.
For alternating current only, not for D.C.
Price, complete, specify voltage—(Code No. V-89)..... \$19.50

Available for 110 or 220 volts.

SAW BLADES



CROSSCUT BLADE (A)

Designed for fast, smooth cross-cutting. Makes a smoother cut than the Combination Blade furnished as standard equipment.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
19773	$7\frac{1}{4}$ "	No. 75	\$5.25
23160	$8\frac{1}{8}$ "	No. 85	6.50
22740	$9\frac{1}{4}$ "	No. 95	7.35

NON-FERROUS METAL CUTTING BLADE (D)

This Blade is for use on non-ferrous metals only. Has teeth shaped and set especially for cutting soft, light gauge non-ferrous metals, including lead.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
21868	$7\frac{1}{4}$ "	No. 75	\$5.85
24073	$8\frac{1}{8}$ "	No. 85	7.00
22744	$9\frac{1}{4}$ "	No. 95	7.65

NAIL CUTTING BLADE (F)

For opening boxes and crates, ripping up floors, where nails are encountered.

Cat. No.	For Saw	Price
20360	No. 75	\$8.25
23159	No. 85	9.35
22741	No. 95	10.00

COMPO-BOARD & WALL BOARD BLADE (G)

Cat. No.	No. 35	Price
20363	Saw Only	\$6.15

FRICITION SAW BLADE (J)

For cutting corrugated galvanized sheet. Cuts faster, with less dirt than abrasive disc. Blade is taper-ground for clearance.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
24771	6"	No. 75	\$7.00
24772	7"	No. 85	7.90
24773	8"	No. 95	8.75

DIAMOND RIM BLADES (K) AND WET ATTACHMENT

COMBINATION RIP AND CROSSCUT BLADE (B)

A particularly fast cutting blade for ripping in all kinds of wood, and for general service cross-cutting. Proper size supplied as standard equipment with all Electric Saws.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
19774	$7\frac{1}{4}$ "	No. 75	\$5.25
23161	$8\frac{1}{8}$ "	No. 85	6.50
22728	$9\frac{1}{4}$ "	No. 95	7.35

PLANER OR MITRE BLADE (C)

For making very smooth cuts, both rip and cross-cut, on interior finish and trim.

Cat. No.	Blade Diam.	Use with Elec. Saw	Price Each
20362	$7\frac{1}{4}$ "	No. 75	\$8.25
23158	$8\frac{1}{8}$ "	No. 85	10.00
22743	$9\frac{1}{4}$ "	No. 95	11.25

ABRASIVE DISC (E)

For sawing and cutting slate, marble, asbestos, tile, Transite, and porcelain.

Cat. No.	For Saw	Price
19766	No. 75	\$2.30
11947	No. 85	2.55
22739	No. 95	3.15

For hard ferrous metals in thin gauges

23582	No. 75	\$2.30
23583	No. 85	2.55
23584	No. 95	3.15

GROOVING SAW BLADE (H)

For use with the No. 75 Saw only. The blade is made with teeth set in two planes, so that a grooving cut, similar to a dado head, can be made.

Cat. No.	Blade Width	Cut	Price Each
23056	$5\frac{1}{2}$ "	$\frac{1}{8}$ "	\$7.65
23057	$5\frac{1}{2}$ "	$\frac{1}{16}$ "	9.00
23058	$5\frac{1}{2}$ "	$\frac{1}{4}$ "	9.35
23059	$5\frac{1}{2}$ "	$\frac{5}{16}$ "	10.00
23060	$5\frac{1}{2}$ "	$\frac{3}{8}$ "	10.50

WET ATTACHMENT



For cutting concrete, transite, asbestos cement, siding and roofing, tile, etc. Longer life than abrasive disc with no tendency to break. Copper disc with diamond particles locked into the rim. USE WITH WET ATTACHMENT.

Cat. No.	Dia.	Thickness	Price Each
30846	7"	.040	\$9.00
30847	7"	.050	12.00
30848	8"	.050	13.20
30849	8"	.064	\$15.60
30850	9"	.050	14.40
30851	9"	.064	18.00

WET ATTACHMENT

Forked nozzle sprays water against both sides of blade—control valve regulates spray. Complete with 10 Ft. length of hose and a fitting which couples to standard type water faucet.

Cat. No. 31006—Wet Attachment..... \$12.00

POWERFUL ELECTRIC TOOLS

"Van Dorn"



BENCH GRINDERS

10"

8"

6" Heavy Duty

6" Junior

All Bench Grinders (except 6" Junior) are equipped with ball bearings, protected from dust and set to minimize spindle vibration; tool rests adjustable for wheel wear; strong wheel guards, completely enclosed (except on 6" Junior); wide, sturdy base with rubber feet; carrying handle on 6-inch units; adjustable spark shield on 8" and 10" Grinders. Heavy-Duty Grinders can be equipped with eye shields and pedestals; and can be supplied as combination grinders for grinding and wire brushing as listed under each unit. Motors are not universal; supplied only for voltages and currents listed under each unit. Spindle no-load speeds are: 25 cycle, 1500 R.P.M.; 40 cycle, 2400 R.P.M.; 50 cycle, 3000 R.P.M.; 60 cycle, 3600 R.P.M.; D.C., 3600 R.P.M.; (except 10" unit, which is 50 cycle, 1500 R.P.M.; 60 cycle, 1800 R.P.M.; D.C., 2000 R.P.M.).

6" JUNIOR BENCH GRINDER

Wheel size, 6" x $\frac{3}{8}$ " x $\frac{1}{2}$ ". Net weight, 31 $\frac{1}{2}$ lbs.
Motor Rating, $\frac{1}{4}$ H.P. ($\frac{1}{3}$ H.P. for 25 cycle).
For all standard A.C. 1-phase volts and cycles only. Not for D.C.
Standard Equipment—1 grinding wheel and 1 wire wheel brush.
Price, complete, specify voltage and cycle..... \$27.00

6" HEAVY DUTY BENCH GRINDER

Wheel size, 6" x $\frac{3}{4}$ " x $\frac{1}{2}$ ". Net weight, 45 lbs.
Motor Rating, $\frac{1}{2}$ H.P.
Supplied for 50-60 cycle, 1 phase A.C. 110 or 120 volts only.
Standard Equipment—2 grinding wheels; 1 medium, 1 fine.
Price, for 50-60 cycle, 1 phase A.C. specify voltage and cycle—(Code No. V-67)..... \$45.00
For all available D.C. currents—(Code No. V-68)..... 50.00
6" COMBINATION GRINDER, with one standard grinding wheel and guard; and one 6" wire wheel brush with extra-wide guard. Available for A.C. only..... 48.00

8" BALL BEARING BENCH GRINDER

Wheel size, 8" x $\frac{1}{8}$ " x $\frac{5}{8}$ ". Net weight, 72 lbs.
Motor rating, $\frac{1}{2}$ H.P. ($\frac{1}{3}$ H.P. for 25 cycle).
Standard Equipment—2 Grinding Wheels; 1 med., 1 fine.
Motor not universal. Not available for direct current. Supplied in standard voltages and currents as follows:
Voltage..... 110, 220 or 250 440 or 550
Phase..... 1, 2 or 3* 2 or 3*
Cycle..... 25, 40, 50-60 25, 40, 50-60
Price, specify voltage, phase and cycle..... \$80.00
8" Combination Grinder, equipped with 1 standard grinding wheel and guard; and 1 extra-wide guard and 8" wire wheel brush..... \$85.00

10" BALL BEARING BENCH GRINDER

Wheel Size, 10" x 1" x $\frac{3}{4}$ ". Net Weight, 137 lbs.
Motor Rating, 1. HP., ($\frac{3}{4}$ H.P. for 25 cycle).
Standard Equipment—2 Grinding Wheels, 1 med.; 1 coarse.
Motor, not Universal.
Supplied in standard voltages and currents as follows:
Voltage..... 110, 220 or 250 110 or 220 440 or 550
Phase..... 1, 2 or 3* D.C. 2 or 3*
Cycle..... 25, 40, 50-60 25, 40, 50-60
Price, specify voltage, phase and cycle..... \$115.00
10" Combination Grinder, equipped with 1 standard grinding wheel and guard and 1 extra-wide guard and 10" wire wheel brush..... \$121.00
*3-phase, 110/220 volt and 220/440 volt units are reconnectable for either voltage. All D.C. units, 1-phase and 2-phase units and 250 and 550 volt 3-phase units are for one voltage only. See Master Catalog for complete voltage, wiring, switch specifications and for Code Numbers where not given above.

ATTACHMENTS AND SUPPLIES FOR BENCH GRINDERS

FOR ALL BENCH GRINDERS

Cat. No.	Item	Price
19115	Cutter Type Wheel dresser	.95
21961	Diamond Wheel dresser	3.75
22713	Adjustable Lamp	4.75

FOR 6" BENCH GRINDERS

6405	1/2" Thrd. Chuck R.H.	\$ 7.00
6664	Spindle Ext. R.H.	4.00
6665	Spindle Ext. L.H.	4.00
3564	Tprd. Buff Spindle L.H.	5.00
3565	Tprd. Buff Spindle R.H.	5.00
*17904	Shatterproof Eye Shield	1.75
*18463	Wide Wheel guard	3.50
87	Pedestal with water pot	22.00

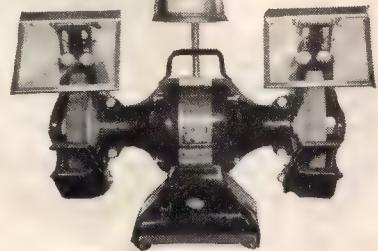
*6" H. D. only.

FOR 8" BENCH GRINDERS

Cat. No.	Item	Price
6666	Spindle Ext. R.H.	\$ 5.50
6667	Spindle Ext. L.H.	5.50
17904	Shatterproof Eye Shield	1.75
18465	Wide Wheel Guard	5.00
87	Pedestal with water pot	22.00

FOR 10" BENCH GRINDERS

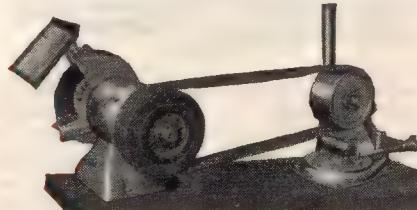
Cat. No.	Item	Price
12297-C	Spindle Ext. R.H.	\$ 8.00
18123	Shatterproof Eye Shield	2.50
18467	Wide Wheel Guard	7.00
88	Pedestal with water pot	28.00



Bench Grinder Equipped
with Lamp and Eye Shields

← Bench Grinder on Pedestal

BENCH BACK-STAND GRINDING EQUIPMENT



The Back-Stand Grinding method employs a belt, bringing many square inches of abrasive in contact with the work. Longer abrasive life results with cooler grinding. A compress contact wheel, mounted on the grinder spindle, has a cushioning action allowing the abrasive belt to conform to the shape of the piece being ground. Idler unit has swivel and tension adjustments; can be used on right or left hand side of grinder.

BACK STAND IDLER ASSEMBLY

Cat. No. 30328.....	\$34.50
(Formerly Code No. V-510)	

COMPRESS CONTACT WHEELS

Catalog No. 30897 6" x 2 $\frac{1}{2}$ " x $\frac{5}{8}$ " Contact Wheel for use on 8" Bench Grinder.....	\$15.00
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Catalog No. 30898 8" x 2 $\frac{1}{2}$ " x $\frac{3}{4}$ " Contact Wheel for use on 10" Bench Grinder.....	\$19.40
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GRIT ABRASIVE BELTS

Catalog No. 31028 60" x 2 $\frac{1}{2}$ " x No. 36 Abrasive Belt.....	\$.48
Catalog No. 31029 60" x 2 $\frac{1}{2}$ " x No. 80 Abrasive Belt.....	.39
Catalog No. 31030 60" x 2 $\frac{1}{2}$ " x No. 150 Abrasive Belt.....	.37

"Van Dorn"

POWERFUL ELECTRIC TOOLS

ELECTRIC DIE GRINDERS

For die shops, stamping plants, tool rooms; compact, powerful, rugged; equipped with $\frac{1}{4}$ " single purpose chuck adaptable to variety of shaped wheels and burrs. Supplied with either bonnet grip or extended handle.

No. 7 DIE GRINDER



Maximum Wheel Size*, $2'' \times \frac{1}{2}'' \times \frac{1}{2}''$; No-load Speed, 19,000 R.P.M.
Net weight, $2\frac{1}{2}$ lbs.; overall length, 9", with end handle $14\frac{1}{4}$ ".
Price, standard unit with end cap—(Code No. V-288)..... \$35.00
Price, with extended end handle—(Code No. V-289)..... 38.00

NEW No. 12 DIE GRINDER



Maximum Wheel Size*, $2\frac{1}{2}'' \times \frac{3}{4}'' \times \frac{1}{2}''$; No-load Speed, 17,500 R.P.M.
Net weight, 4 lbs.; overall length, $12\frac{1}{4}$ ", with end handle $16\frac{1}{4}$ ".
Price, standard unit with Bonnet Cap, Switch in Cap—(Code No. V-291),
specify voltage..... \$40.00
Price, with Extended switch handle—(Code No. V-290), specify voltage 43.00

REPLACEMENT AND EXTRA EQUIPMENT

No. 20329 $2\frac{1}{2}$ " High Speed Bonded Grinding Wheel.....	\$1.30
No. 26537 $2\frac{1}{2}$ " Wheel Guard.....	2.25
No. 26361 Outer Wheel Washer.....	1.00
No. 26362 Inner Wheel Washer.....	.50
No. 20285 Double End Wrench ($\frac{9}{16}$ " and $1\frac{1}{16}$ ").....	.25
No. 26533 $\frac{1}{4}$ " S. A. Chuck with $\frac{1}{8}$ " Reducing Sleeve.....	3.50
No. 21955 $\frac{3}{8}$ " Reducing Sleeve only for No. 26533 Chuck.....	.75
No. 26530 Tool Post Holder.....	5.00

For Types A, B No. 12 Die Grinder

No. 21757 Wheel Arbor.....	1.50
No. 20845 Tool Post Holder.....	5.00

No. 20 DIE GRINDER



Maximum Wheel Size*, $3'' \times \frac{1}{2}'' \times \frac{3}{8}''$; No-load Speed, 16,000 R.P.M.
Net weight, 7 lbs.; overall length, $17\frac{1}{4}$ "; shipping weight $11\frac{1}{4}$ lbs.
Price, with extended end handle—(Code No. V-499), specify voltage..... \$53.00

*No wheels are supplied as standard equipment with Die Grinders. Wheel Guards, Wheel Arbors and maximum size Grinding Wheels can be furnished at extra cost. Ask your jobber about variety of mounted wheels and burrs for use with these units.

PORABLE GRINDERS

3" PORTABLE GRINDER



Wheel Size, $3'' \times \frac{1}{2}'' \times \frac{3}{8}''$; No-load speed, 16,000 R.P.M.
Net weight, 8 lbs.; overall length, $16\frac{1}{4}$ ".
Price, complete, specify voltage—(Code No. V-395)..... \$53.00

Standard Voltage (above units); 110, 220, 250 volts also available.

REPLACEMENT AND EXTRA EQUIPMENT FOR No. 20 DIE GRINDER AND 3" PORTABLE GRINDER

No. 24317 3" High Speed Bonded Grinding Wheel.....	\$1.45
No. HFG-148 3" Wheel Guard Assembly, complete	2.50
No. HGF-127 Clamp Nut.....	.75
No. 20285 Double End Wrench ($\frac{9}{16}$ " and $1\frac{1}{16}$ ").....	.25
No. 24187 $\frac{1}{4}$ " S. A. Chuck with $\frac{1}{8}$ " Reducing Sleeve.....	3.50
No. 21955 $\frac{3}{8}$ " Reducing Sleeve only for No. 24187 Chuck.....	.75

HEAVY-DUTY PORTABLE GRINDERS

Complete line with most advanced features. Splined gear mountings, steel inserts for bearings, welded steel wheel guards; dust-sealed commutators and switches; ball-bearings set at spindle ends absorb side thrust; shaped grips and switch handles improve control. All grinders except 8" furnished with correct size grinding wheel.

4" PORTABLE GRINDER



Wheel Size, $4'' \times \frac{3}{4}'' \times \frac{1}{2}''$; No-load Speed, 5250 R.P.M.
Net weight, $13\frac{1}{4}$ lbs.; overall length, $20\frac{1}{4}$ "; shipping weight 18 lbs.
Price, complete, specify voltage—(Code No. V-59)..... \$62.00

5" PORTABLE GRINDER



Wheel Size, $5'' \times \frac{3}{4}'' \times \frac{1}{2}''$; No-load Speed, 4500 R.P.M.
Net weight, $15\frac{1}{2}$ lbs.; overall length, $23\frac{1}{8}$ "; shipping weight, 21 lbs.
Price, complete, specify voltage—(Code No. V-60)..... \$80.00

6" PORTABLE GRINDER



Wheel Size, $6'' \times 1'' \times \frac{5}{8}''$; No-load Speed, 3800 R.P.M.
Net weight, 20 lbs.; overall length, 25"; shipping weight, 26 lbs.
Price, complete, specify voltage—(Code No. V-61)..... \$100.00

8" PORTABLE GRINDER



Wheel Size, $8'' \times 1'' \times \frac{5}{8}''$; No wheels furnished with 8" Grinder.
No-load Speed, 4000 R.P.M.
Optional Speed—5000 R.P.M. No extra charge.
Net weight, $25\frac{1}{2}$ lbs.; overall length, $26\frac{1}{4}$ "; shipping weight, $32\frac{1}{4}$ lbs.
For use with special bonded wheels on high speed service only.
No wheels furnished with 8" Grinder.

Price, complete, specify voltage—(Code No. V-62)..... \$120.00
All units available for 110, 220 or 250 volts. Universal Motors.

Standard Equipment—For 4", 5" and 6" Grinders—3-conductor cable and plug (3rd wire for grounding); dust-sealed plunger switch; grip end handle; adjustable steel wheel guard and one grinding wheel.

For 8" Grinder—3-conductor cable and plug (3rd wire for grounding); dust-sealed plunger switch; grip end handle, suspension eyebolt; adjustable steel wheel guard.

Optional Equipment—For 8" Grinder—Spade type switch handle in place of straight grip handle, no extra charge.

Optional Speed—For 8" Grinder—5000 R.P.M., no extra cost.

Standard Voltage—110; also available for 220 or 250 volts. Wheel Rotation—Counter-clockwise, facing wheel-end.

ATTACHMENT

No. 2473 Suspension Eyebolt—For 4", 5", 6" and 8" Grinders..... \$.25

POWERFUL ELECTRIC TOOLS

"Van Dorn"

PORTABLE ELECTRIC SANDERS

For surfacing all metals, wood, stone, tile; smoothing welds, removing rust and scale, welding and casting ridges; rubbing lacquer. All Sanders furnished with flexible moulded rubber pads, assorted abrasive discs, detachable side handle for use on right or left hand operation. Accessories available for all but Junior Sander include Wire Cup Brushes, Planer Heads, Saucer Grinding Wheels, Rubbing and Buffing Pads. Complete assortment of Sanding Discs.

7" JUNIOR SANDER



For intermittent service in paint shops, metal working shops and foundries. Not recommended for continuous production use.

Diameter of disc.....	7"
No-load speed.....	3700 R.P.M.
Weight: Net.....	7½ lbs. Shipping..... 12 lbs.
Overall length (not including pad).....	14¾"
Price, complete, specify voltage—(Code No. V-91).....	\$39.50

7" STANDARD SANDER (EQUIPPED WITH SPINDLE LOCK)



Amply powered and constructed for constant production service on all types of metal and wood surfacing.

Diameter of disc.....	7"
No-load speed.....	4200 R.P.M.
Weight: Net.....	12½ lbs. Shipping..... 16½ lbs.
Overall length (not including pad).....	17½"
Price, complete, specify voltage—(Code No. V-92).....	\$53.00

7" HEAVY DUTY SANDER (EQUIPPED WITH SPINDLE LOCK)



Designed to meet the demand for a universal motored sander of superior power for production metal finishing.

Diameter of disc.....	7"
No-load speed.....	4200 R.P.M.
Weight: Net.....	14½ lbs. Shipping..... 21½ lbs.
Overall length (not including pad).....	18"
Price, complete, specify voltage—(Code No. V-93).....	\$65.00

9" HEAVY DUTY SANDER (EQUIPPED WITH SPINDLE LOCK)



A new Heavy Duty tool designed for constant production-line use with 9-inch abrasive discs. New, fast spindle lock for quicker change of pads and abrasive discs. Spiral-bevel gears. Switch and commutator sealed against dust and grit. Bearings also grease-sealed against dust and dirt.

Diameter of disc.....	9"
No-load speed.....	4200 R.P.M.*
Weight: Net.....	18½ lbs. Shipping..... 25 lbs.
Overall length (not including pad).....	19½"
Price, complete, specify voltage—(Code No. V-433).....	\$78.00

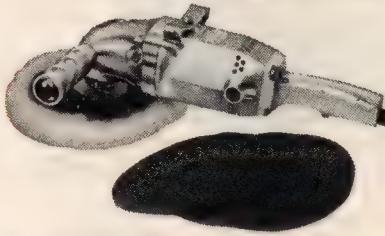
*Optional Speed—5000 R.P.M.—No extra cost.

ADJUSTABLE SPEED SANDER-BUFFERS

These two units are especially adapted to smaller shops handling a variety of sanding and polishing jobs; but not wishing to purchase individual tools for each type of operation. Ideal for intermittent service; not recommended for constant production use.

The units are equipped with two sets of double gears, and a transmission gear which is shifted from one to the other by means of a gear shift, set in the top of the gear housing. A patented gear locking pin in the gear housing locks the gears for change of pads and discs.

7" STANDARD SANDER-BUFFER



For shops doing both sanding and buffing in small volume. Gear shift in head quickly changes from high to low spindle speed. Equipped with 7" lambswool bonnet, reversible side handle.

No-load Speeds, 3700 R.P.M. and 1400 R.P.M.
Net weight, 9 lbs.; overall length, 15¼".
Price, complete, specify voltage—(Code No. V-283)..... \$59.50

7" HEAVY DUTY SANDER-BUFFER

For those desiring a unit for heavier duty than the Standard Combination Sander-Buffer.

No-load Speeds, 4200 R.P.M. and 1300 R.P.M.
Net weight, 14½ lbs.; overall length, 19¾".
Price, complete, specify voltage—(Code No. V-384)..... \$67.00

All units available for 110, 220 or 250 volts. Universal Motors.

AUTOMATIC ELECTRIC BUFFER



Equipped with reservoir, thumb-operated pump and feeder tube which automatically applies Power-Glaze to the car surface while working. No stopping for hand application; no drying of liquid. Uniform results, more jobs per day. Increased power, correct speed, more torque, light weight.

No-load Speed, 1400 R.P.M.; Diameter of Pad, 7".
Net weight, 9½ lbs.; overall length, 16¼".
Price, complete, specify voltage—(Code No. V-97)..... \$59.50

STANDARD ELECTRIC BUFFER

Excellent unit for smaller shops. Does not have automatic-feed feature (liquid must be applied by hand). Especially adapted to rubbing-down new paint and lacquer; for buffing and cleaning all metal and wood surfaces and waxing.

No-load Speed, 1400 R.P.M.; Diameter of Pad, 7".
Net weight, 8½ lbs.; overall length, 14¼".
Price, complete, specify voltage—(Code No. V-96)..... \$49.50

Equipment for both Buffers includes flexible rubber pad; sponge rubber cushion pad; lambswool buffing bonnet.

All units available for 110, 220 or 250 volts. Universal Motors.



WIRE CUP BRUSHES

Made by us for use on Sanders to remove rust, scale and paint; to clean tanks and boat hulls; for cleaning castings and structural steel 5/8"-11 thread hub threads on Sander spindle.

No. 18056 4" Wire Cup Brush, for 7" Standard Sander.....	\$2.25
No. 24353 5" Wire Cup Brush for 7" Heavy Duty Sander.....	2.75
No. 12398 6" Wire Cup Brush for 9" Heavy Duty Sander.....	3.25

"Van Dorn" POWERFUL ELECTRIC TOOLS



SANDER AND BUFFER ATTACHMENTS AND ACCESSORIES



SANDING DISCS

Sanding and abrasive discs can be furnished in a variety of grades and grains. Discs designated as "Open Grain" are especially suited for wood sanding (Nos. 16, 24 and 36 for removing paint and varnish); "Closed Grain" discs are for metal work.

GRADE	7-INCH SANDING DISCS			9½-INCH SANDING DISCS		
	Cat. No.	List Price		Cat. No.	List Price	
		Each	Per 100		Each	Per 100
*16	17815	\$0.32	\$31.90	26458	\$0.43	\$42.58
24	9990	.25	24.82	10719	.34	33.07
30	18488	.25	24.56	18492	.33	32.77
36	9991	.25	24.30	10720	.32	31.95
50	9992	.23	22.70	12153	.31	30.24
60	18489	.22	21.56	18493	.29	28.79
80	10485	.20	19.85	10721	.28	27.10
100	12145	.20	19.85	12149	.28	27.10
120	12146	.20	19.85	12150	.28	27.10
150	12147	.20	19.85	12151	.28	27.10
180	12148	.20	19.85	12152	.28	27.10
Open Grain						
*16	15134	.32	31.90	15137	.43	42.58
24	15135	.25	24.82	15138	.34	33.07
36	15136	.25	24.30	15139	.32	31.95
50	12011	.23	22.70	12131	.31	30.24
60	18491	.22	21.56	18495	.29	28.79
80	12012	.20	19.85	12132	.28	27.10
120	12013	.20	19.85	12133	.28	27.10

*No. 16 discs packed 10 to a box; other discs packed 25 to a box.



REPLACEMENT SANDER PADS AND PARTS

All pads and replacement assemblies are interchangeable on all Sanders and Buffers as the spindle diameter and thread is the same for all units of this group; $\frac{1}{2}$ "-11 thread.

No. 22589 5" Moulded Rubber Pad	\$2.50
No. 23315 7" Moulded Sisal Pad	2.75
No. 17687 7" Moulded Rubber Pad, complete	3.00
No. 18329 7" Heavy Duty Moulded Rubber Pad	3.50
No. 18330 9" Moulded Rubber Pad	5.50
No. 14237 3" Flexible Pad, complete	3.50
No. 14551 Replacement Pad for 3" Flexible Pad	1.15
No. 10279 Camp Washer	.25



"KOOLFLEX" BACKING PADS

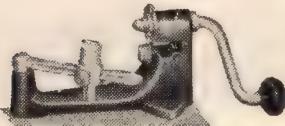
Light-weight, fabric-base, plastic-bonded discs provide greater flexibility, cooler operation and longer life on sanding applications. Used with No. 22589 Moulded Rubber Pad. For maximum flexibility, use one "Koolflex" pad with corresponding size abrasive disc. For "feathering" finish, use No. 31000 "Koolflex" pad with 9" abrasive. For more rigid backing use both sizes of "Koolflex" pads with 9" abrasive. Use with Special Clamp Washers listed below.

No. 31000 6½" "Koolflex" Backing Pad	\$1.50
No. 31001 8½" "Koolflex" Backing Pad	2.00
No. 31003 Spec. Clamp Washer—use either pad	.30
No. 31004 Extra-long Clamp Washer, to be used when both "Koolflex" pads are used	.30

ABRASIVE DISC TRIMMER

Facilitates the complete use of abrasive discs, cutting them down to smaller diameters as outer surface is used up. Trimmer has adjustable center hole pilot on a calibrated swinging arm; a cutting wheel mounted on one-piece spindle and crank, and a base casting which can be screwed down to the bench.

No. 21806 Abrasive Disc Trimmer, complete	\$6.00
No. 21753 Replacement Cutter	.40



SAUCER GRINDING WHEEL

For some metal grinding applications, the Sander equipped with a Saucer Grinding Wheel does smoother and faster work than a Portable Grinder. Saucer Wheels have $\frac{3}{8}$ "-11 thread bushing to fit spindle direct.

No. 24050 4" Saucer Grinding Wheel (for 7" Std.)	\$5.50
No. 23444 5" Saucer Grinding Wheel (for 7" H.D.)	6.90
No. 18039 6" Saucer Grinding Wheel (for 9" Sander)	8.35
No. 17329 Skirt Wheel Guard for 9" H.D. Sander	5.00

CUP GRINDING WHEEL

For smoothing welds and other metal surfaces. Use No. 10711 Spindle Extension to attach to Sander.

No. 10663 4" Cup Grinding Wheel (Grade 36-H)	\$1.95
No. 10711 Spindle Extension	2.00

LAMBSWOOL BUFFING PAD AND BONNET

For cleaning and buffing lacquered finishes and for obtaining final high lustre after spraying. Attached direct to flexible pad of Buffer.

No. 13086 Lambswool Buffing Pad for 7" Buffer or 7" Sander, box of six	\$6.40
No. 22176 Lambswool Buffing Bonnet, each (Use with Sponge Rubber Cushion)	2.14
No. 22174 Sponge Rubber Cushion, 7"	.90
No. 13087 Lambswool Buffing Bonnet with hood and draw string	1.70
No. 22191 Long Clamp Washer for No. 22174 Sponge Rubber Cushion	.30

RUBBING PADS

For rubbing down orange peel in lacquer finishes, etc. Attaches direct to flexible pad of Buffer.

No. 20619 7" Pile Fabric Rubbing Pad	\$1.25
No. 21207 9½" Pile Fabric Rubbing Pad	2.00
No. 10661 Felt Rubbing Pad for 7" Buffer or 7" Sander	1.28
No. 10709 Felt Rubbing Pad for 9" Sander	1.70

POWER RUBBING COMPOUND

Applied with Buffer or Sander equipped with pile fabric pad, will quickly remove "orange peel" and spray pits from newly lacquered surfaces, giving a smoother, more uniform surface.

Power Rubbing Compound, price per gallon—(Code No. V-477) \$2.25

POWER GLAZE

Power Glaze is a special compound, for use with the Electric Power Buffer. Cleans and polishes in one operation.

Power Glaze, price per gallon—(Code No. V-481) \$2.85

POWER WAX

Power Wax used with the Buffer produces a hard, brilliant, waxed finish. Ideal for new or newly lacquered cars or to give an extra protective coating to cars cleaned with Power Glaze.

Power Wax, 1 Qt. can—(Code No. V-511) \$1.50

ROTARY PLANER HEADS

Perform many wood surfacing and shaping operations formerly done with jack-plane and adz. Two types of planer head are supplied; one with rounded surface for deep gouging, the other with flat face for surfacing and semi-finishing. These heads are interchangeable on the spindle of the 7" Heavy-Duty and 9" Heavy Duty Sander. For smoothing and fitting joints in concrete forms; surfacing boat hulls and decks, piers, floors, etc.; beveling and shaping beams and timbers, etc.

No. 14743 Set of two 5" Planer Heads, one Gouging and one Surfacing, complete with blades, packed in neat oak box	\$20.00
No. 14734 5" Gouging Planer Head, complete with blades, in box	11.00
No. 14735 5" Surfacing Planer Head, complete with blades, in box	11.00
No. 14733 Replacement Blade, Set of 3	1.90

POWERFUL ELECTRIC TOOLS

"Van Dorn"

WHIRLWIND WIRE WHEEL BRUSHES



WHIRLWIND wire wheel brushes give you more brush for your money. More wire per section—closely packed—securely anchored—for long life on heavy duty work. More quality—highest grades of wire—carefully selected and tested. More variety of sizes and types—one, two- or three-sections—three wire sizes—six diameters—interchangeable arbor hole adaptors—fit any arbor or spindle.

.014" WIRE DIAMETER SIZE

BRUSH DIAM.	NO. OF SECTS.	BRUSH WIDTH	ARBOR ADAPTOR*	CATALOG NUMBER	PRICE EACH*
		Hub Face			
4"	1	7/16" 11/16"	5/8" 7/8" 1 1/8"	23200 23201 21397	\$.72 .98 1.28
	2	1"	1 1/8"	23202	1.15
	3	1"	1 1/8"	23203 21401	1.62 2.14
6"	1	7/16" 11/16"	5/8" 1"	23204	1.50
	2	1"	1"	23205	2.10
	3	1"	1 1/8"	21411	2.78
7"	1	7/16" 11/16"	5/8" 1"	23206	1.62
	2	1"	1 1/8"	23207	2.25
	3	1"	1 1/8"	21405	3.00
8"	1	7/16" 11/16"	7/8" 1 1/8"	21407	5.14
10"	4	1 5/16"	1 1/8"	21409	6.85
	4	1 5/16"	2 1/4"		
	4	1 5/16"	2 1/4"		

.0118" WIRE DIAMETER SIZE

4"	1	7/16" 11/16"	5/8" 7/8" 1 1/8"	27000 27001 27002	.72 .98 1.28
6"	2	1"	1 1/8"	27004	1.62
	3	1"	1 1/8"	27005	2.14
	1	7/16" 11/16"	7/8" 1 1/8"	27009	1.62
8"	2	1"	1 1/8"	27010	2.25
	3	1"	1 1/8"	27011	3.00
	4	1 5/16"	1 1/8"	27012	5.14
10"	4	1 5/16"	2 1/4"	27013	6.85
12"	4	1 5/16"	2 1/4"		

.005" WIRE DIAMETER SIZE

4"	1	7/16" 11/16"	5/8" 7/8" 1 1/8"	23208 23209 23210	1.07 1.40 1.84
6"	2	1"	1 1/8"	23212	2.35
	3	1"	1 1/8"	23213	3.12
	1	7/16" 11/16"	5/8" 1 1/8"	23217	2.30
8"	2	1"	1 1/8"	23218	3.30
	3	1"	1 1/8"	23219	4.40
	1	7/16" 11/16"	5/8" 1 1/8"		

*Price includes one set of Arbor Hole Adaptors. The size Adaptor normally furnished is indicated above, but any other size from $\frac{5}{8}$ " to $1\frac{1}{4}$ " can be substituted, if specified in ordering.

GRINDING WHEELS

UNIT	CAT. NO.	PRICE	GRADE
6" Junior Bench Grinder (A)	18124	\$1.70	Fine 60K
	18125	1.70	Med. 36G
6" H.D. Bench Grinder (H & K)	15315	1.95	Med. 36G
	15314	1.95	Fine 60K
6" Bench Grinder (Ball Bearing) (G)	13950	2.30	Med. 36G
	5183	2.30	Fine 60K
7" Bench Grinder (Type B)	14236	2.90	Med. 36G
	14235	2.90	Fine 60K
8" Bench Grinder (Model F)	18061	4.90	Med. 36K
	18062	4.90	Fine 60M
10" Bench Grinder (B and C)	10275	7.35	Med. 40K
	10274	7.35	Coarse 24H
Portable Grinders & Die Grinders	20330	1.15	36-598E
	20329	1.30	36-598E
	24317	1.45	36-598E
4" Portable Grinder	6772	1.20	Med. 36G
5" Portable Grinder	3042	1.70	Med. 36G
6" Portable Grinder	3148	2.25	Med. 36G
7" Junior Sander	10663	1.95	Med. 36H
7" Special Sander	24050	5.50	163-9-K4
7" H.D. Sander	23444	6.90	163-9-K4
9" H.D. Sander	18039	8.35	163-9-K4



VACKAR—Electric Vacuum Cleaner No. 95 VACKAR

A super-powered cleaner for both automotive and industrial use. With both inlet and outlet hose connections, it can be used as a vacuum cleaner or a blower. The No. 95 Vackar makes an ideal all-purpose cleaner for heavy-duty service in garages, super-service stations, and wash-racks.

Its dual service as cleaner and blower also adapts it to all types of industrial cleaning. It is self-contained, rolls easily over rough floors on ball-bearing swivel casters and its 15-foot flexible hose easily reaches out-of-the-way corners.



Dimensions: Height, 28"; Diameter of top, 16 1/4"; Diameter of Base, 18 1/2". Sealed vacuum pull, 65"; Vacuum with 1" orifice, 18". Net weight, 52 lbs.; Shipping weight, 67 lbs.

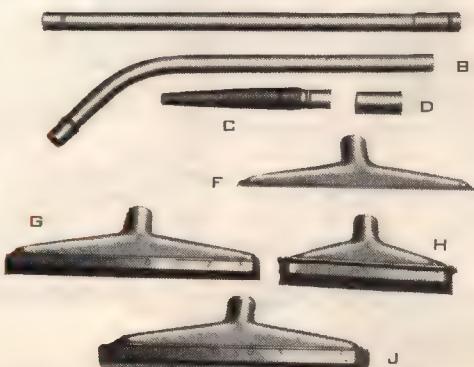
Price, complete, specify voltage—(Code No. V-425)..... \$137.50 Available for 110, 220 or 250 volts. Universal Motor.

No. 95 VACKAR REPLACEMENT ATTACHMENTS

No. 23902 15-foot Flexible Hose	\$10.50
No. 23891 Wide Upholstery Nozzle	2.25
No. 23903 Flat Tube Nozzle	.50
No. 18186 6 1/2" Upholstery Brush	.85
No. 23676 Set of 3 Ball-Bearing Casters	3.00

INDUSTRIAL ATTACHMENTS FOR VACKAR

To expand the use of the Vackar to industrial cleaning, a special group of attachments is listed below. The various nozzles fit the long rigid operator's handle, which is in two parts. This handle requires the Coupling Adaptor to fit the hose of the No. 95 Vackar. The Blower Tool also uses the Coupling Adaptor to fit the No. 95 Vackar hose.



No. 24834 Operator's Handle—Straight Section* (A)	\$4.00
No. 24835 Operator's Handle—Curved Section (B)	4.00
No. 26081 Soft Rubber Blower Tool* (C)	1.85
No. 24836 Coupling Adaptor for No. 95 Vackar (D)	1.15
No. 24833 14" Floor Nozzle** (E)	5.50
No. 26084 14" Felt Floor Tool** (F)	10.00
No. 26085 Replacement Felt Strip for No. 26084 (Set of 2)	1.65
No. 26083 10" Carpet and Floor Brush Tool** (G)	11.25
No. 26600 Replacement Nozzle for No. 26083	6.95
No. 26518 Replacement Brush for No. 26083	4.30
No. 26085 14" Squeegee Nozzle** (J)	13.25
No. 26087 Replacement Wide Rubber Strip for No. 26085 (Set of 2)†	2.25
No. 26088 Replacement Narrow Rubber Strip for No. 26085 (Set of 2)†	2.25
No. 25913 Extension Coupling (Joins 2 Hose Sections)	1.00

*Price includes Set of No. 26087 and Set of No. 26088.

**Use with Adaptor No. 24836 for No. 95 Vackar.

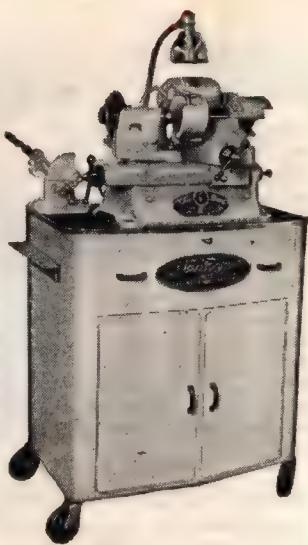
†Fit on end of Operator's Handle—Nos. 24834-24835.

"Van Dorn"

POWERFUL ELECTRIC TOOLS

ELECTRIC VALVE RECONDITIONING SYSTEM

A complete valve reconditioning "shop" on wheels. Smart display of precision equipment helps sell reconditioning jobs; sturdy metal cabinet carries all tools necessary for complete, accurate job right at the car. Roomy cabinet top holds Super-Service Resurfacers and Vibro-Centric Dressing Stand; large drawer has definite space for each item of Vibro-Centric equipment, including Pilots, Stones and Sleeves, plus carbon cleaning brushes, valve guide cleaners and room for other hand tools; lower storage section for Vibro-Centric Driver and other items such as gaskets, drills, etc.



Cabinet Dimensions: Height, 35"; width, 35"; depth, 20". Shipping weights: Valve Reconditioning System, 322 lbs.; Cabinet only, 130 lbs.

STANDARD ELECTRIC VALVE RECONDITIONING SYSTEM

- 1 Valve Reconditioning System Cabinet.
- 1 Super-Service Resurfacers (Wet-Grinding or Standard).
- 1 Standard Driving Unit (Straight or 55°).
- 3 Valve Guide Cleaners: 21441 ($\frac{5}{16}$ "); 21445 ($\frac{3}{8}$ "); 21449 ($\frac{7}{16}$ ").
- 2 Carbon Cleaning Brushes: 21416 (Heavy Duty); 21417 (Side Flare).
- 1 Heavy-Duty Dressing Stand—No. 20153.
- 2 Standard Stone Sleeves—No. 22100.
- 5 Self-Centering Pilots
- 2 Hard Seat Stones { As itemized in Standard Universal Vibro-Centric Kit.
- 6 Soft Seat Stones
- 2 Finishing Stones

Standard Voltage 110; also available for 220 or 250 volts.

Price, Standard Valve Reconditioning System, complete, specify voltage—with No. V-115 Standard Straight Driver and—
 $\frac{5}{16}$ " Standard Resurfacers—(Code No. V-106-VS)..... \$331.50
 $\frac{5}{8}$ " Standard Resurfacers—(Code No. V-107-VS)..... 341.50
 $\frac{9}{16}$ " Wet-Grinding Resurfacers—(Code No. V-281-VS) 346.50
 $\frac{5}{8}$ " Wet-Grinding Resurfacers—(Code No. V-282-VS) 356.50
—with No. V-440 Standard 55° Driver and—
 $\frac{5}{16}$ " Standard Resurfacers—(Code No. V-465-VS) 337.00
 $\frac{5}{8}$ " Standard Resurfacers—(Code No. V-466-VS) 347.00
 $\frac{9}{16}$ " Wet-Grinding Resurfacers—(Code No. V-463-VS) 352.00
 $\frac{5}{8}$ " Wet-Grinding Resurfacers—(Code No. V-464-VS) 362.00

HEAVY-DUTY ELECTRIC VALVE RECONDITIONING SYSTEM

- 1 Valve Reconditioning System Cabinet.
- 1 Super-Service Resurfacers (Wet-Grinding or Standard).
- 3 Valve Guide Cleaners: 21441 ($\frac{5}{16}$ "); 21445 ($\frac{3}{8}$ "); 21449 ($\frac{7}{16}$ ").
- 2 Carbon Cleaning Brushes: 21416 (Heavy-Duty); 21417 (Side Flare).
- Contents of Heavy-Duty Universal Vibro-Centric Kit; including Heavy-Duty Driving Unit, Heavy-Duty Dressing Stand, 2 Standard Stone Sleeves, 5 Self-Centering Pilots; 8 Hard Seat Stones, 7 Soft Seat Stones, Pilot Turning Wrench.

Standard Voltage 110; also available for 220 or 250 volts.

Prices, Heavy-Duty Electric Valve Reconditioning System, complete, specify voltage—with—

- | | |
|--|----------|
| $\frac{5}{16}$ " Standard Resurfacers—(Code No. V-341-VS)..... | \$347.00 |
| $\frac{5}{8}$ " Standard Resurfacers—(Code No. V-342-VS)..... | 357.00 |
| $\frac{9}{16}$ " Wet-Grinding Resurfacers—(Code No. V-339-VS) 362.00 | |
| $\frac{5}{8}$ " Wet-Grinding Resurfacers—(Code No. V-340-VS) 372.00 | |

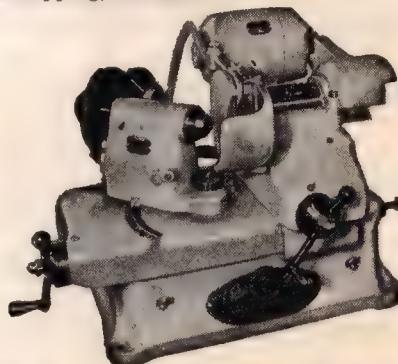
Price, Valve Reconditioning System Cabinet only—(Code No. V-108)..... 52.00

SUPER SERVICE VALVE RESURFACER



Resurfacers
for Dry
Grinding

Weight: Net, 143 lbs.; shipping, 172 lbs.



Resurfacers
for Wet
Grinding

Weight: Net, 146 lbs.; shipping, 178 lbs.

Precision Valve Grinders combining speed of operation, smooth finish and absolute accuracy in the reconditioned valve face. Two independent universal motors give abundant power and in addition—a third independent motor for driving pump on Wet-Grinding Resurfacers only; feed screws give lever-feed speed with screw-feed accuracy; 3-point bearing on feed tables gives smooth action; "twin-grip" collet insures accurate alignment of valve face and stem; ball bearing wheel spindle, double-ended to provide for valve stem and rocker arm grinding; universal work head, adaptable to all popular valve angles and stem sizes.

Two types of Super-Service Resurfacers; Standard (Dry Grinding) Resurfacers for fast, accurate work in general shops; and new Wet Grinding Resurfacers for super-smooth finish and greater grinding speed.

At slight extra cost, any unit can be equipped with Micrometer Valve Stem Grinding Attachment for accurate tappet clearance on Ford valves; with Rocker Arm and Breaker Point Grinding Attachments; all of which attach to outer end of wheel spindle.

The Super-Service Valve Resurfacers can be bought in any of four combinations—in either $\frac{5}{16}$ " ($\frac{5}{32}$ "- $\frac{1}{4}$ " stem sizes) or $\frac{5}{8}$ " ($\frac{9}{32}$ "- $\frac{11}{16}$ " stem sizes); and as a Wet-Grinding or Dry-Grinding Resurfacers. In all models the collet head is adjustable to grind angles from 30° to 90°, and the unit is completely equipped with Universal motors, a 4" grinding wheel and wheel dresser, 3-wire cable and plug; and valve stem collet.

Code V-106— $\frac{5}{16}$ " Dry Grinding Super-Service Resurfacers.....	185.00
Code V-107— $\frac{5}{8}$ " Dry-Grinding Super-Service Resurfacers.....	195.00
Code V-281— $\frac{9}{16}$ " Wet-Grinding Super-Service Resurfacers.....	200.00
Code V-282— $\frac{5}{8}$ " Wet-Grinding Super-Service Resurfacers.....	210.00

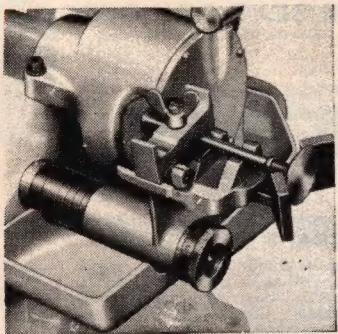
All Resurfacers available for 110, 220 or 250 volts.



POWERFUL ELECTRIC TOOLS

"Van Dorn"

VALVE RESURFACER ACCESSORIES MICROMETER VALVE STEM GRINDING ATTACHMENT



A new "universal" stem grinding attachment for obtaining exact tappet clearance on all Ford valves and other valves not having tappet adjustments. The same attachment will also grind and true Ford and other tappets. The accuracy and simplicity of this attachment will save many hours of guesswork. Fits all Super-Service (Standard or Wet Grinding) Resurfacer and operates on the outer end of the wheel spindle; does not interfere with the refacing set-up.

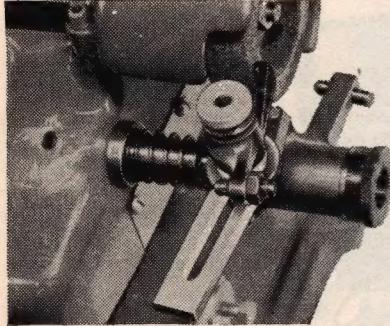
No. 18252 Complete Micrometer Valve Stem Grinding Attachment,
as detailed above..... \$19.50

WET ATTACHMENT FOR VALVE STEM GRINDER

Can be used with Micrometer Valve Stem Grinding Attachment or Rocker Arm Grinding Attachment on Wet Grinding Resurfacers only.

No. 24247 Wet Grinding Attachment, complete..... \$17.50

ROCKER ARM GRINDING ATTACHMENT



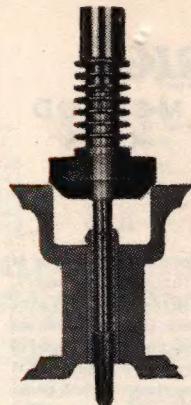
Operates on outer end of Resurfacer wheel spindle. Consists of a micrometer feed mounted on a machined bar. A bracket holds a diamond point* for dressing the wheel, and an adjustable arm, pivoted and slotted to permit the grinding of various size Rocker Arms. A double-cone clamp holds the Rocker Arm to be ground. Grinding Wheel is not included with the attachment. Use No. 20939 Wheel.

*Use diamond point supplied with Resurfacer. Attachment fits all Super-Service Resurfacers. Can be used with or without Wet Attachment.

No. 20949 Rocker Arm Grinding Attachment..... \$15.00

ADDITIONAL ACCESSORIES

No. 19898 15° and 90° Dressing Attachment, and special wheel, complete	\$7.25
No. 19897 Special Wheel only for 15° and 90° Valves.....	2.70
No. VR-533 Standard 4" Wheel for hard valves.....	2.70
No. 16371 Special 4" Wheel for stellite valves.....	2.45
No. 20939 4" Recessed Wheel for Micrometer Attachment and Rocker Arm Grinding Attachment.....	2.40
No. 22813 Special Fine-Grade Valve Finishing Wheel.....	2.70
No. 18325 Standard Collet (9/16"-7/16" cap.).....	8.00
No. 15200 Standard Collet (1/2"-11/16" cap.).....	10.00
No. 26060 Special Collet for short valve stems (1/4"-7/16" cap.).....	8.00
No. 17745 Special Collet for short valve stems (1/2"-11/16" cap.).....	10.00
No. 20934 Wheel Dresser and V-block without Diamond.....	1.50
No. 5574 Diamond and Nib for all Wheel Dressers.....	3.00
No. 16286 V-Belt for Work (Collet) Spindles.....	.50
No. 23617 V-Belt for Wheel Motor.....	.50
No. 20380 8-oz. Container Grinding Compound for Wet Resurfacer.....	.35
No. 22946 Pint Container Grinding Compound for Wet Resurfacer.....	.60
No. 22947 Quart Container Grinding Compound for Wet Resurfacer.....	.95
No. 22173 Adjustable Lamp, complete with Socket, Switch, etc.....	4.75



THE "VIBRO-CENTRIC" PRINCIPLE

Vibro-Centric Driver spindles incorporate a positive vibrating action, which lifts the stone from the seat while grinding. All grinding is concentric. The Self-Centering Pilot centers in the top and bottom of the guide on two machined tapers, compensating for wear and oversizes. Vibro-Centric Stones are specially made—in 3 grades; for cast iron seats; for hard inserts; and for finish grinding. Stones are interchangeable on accurately bushed stone sleeves.

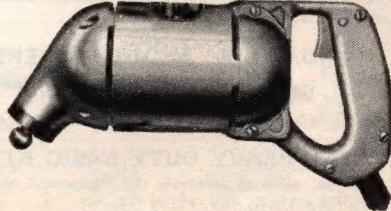
VALVE SEAT GRINDERS STANDARD STRAIGHT VIBRO-CENTRIC GRINDER



cleans stones with a minimum of waste. Self-Centering Pilots center the Stone and Sleeve in the valve guide.

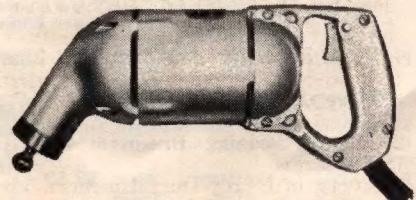
Spindle speed.....	12000 R.P.M.
Net weight.....	6 1/4 lbs.
Overall length.....	12 3/4"
Price, complete, specify voltage—(Code No. V-115).....	\$36.00
Standard voltage 110; also available for 220 or 250 volts.	
No. 21068 Angle Drive Attachment.....	\$13.00

STANDARD 55° ANGLE "VIBRO-CENTRIC" DRIVER



Spindle speed.....	12000 R.P.M.
Net weight.....	6 1/4 lbs.
Overall length.....	11 1/2"
Price, complete, specify voltage—(Code No. V-440).....	\$42.00
Standard voltage 110; also available for 220 or 250 volts.	

HEAVY DUTY "ANGLE" VIBRO-CENTRIC GRINDER



Has nearly double the power of the Standard Unit, maintaining grinding speed with larger, heavier stones. Working clearance is greatly improved by the Angle-Head of the Heavy Duty Driver, making it easy to grind valve seats obstructed by body cowls, truck cab or other interference.	
Spindle speed	10,000 R.P.M.
Net weight.....	8 lbs.
Overall length.....	12 3/4"
Price, complete, specify voltage—(Code No. V-331).....	\$48.00
Standard voltage 110; also available for 220 or 250 volts.	

Ask for booklet "THE PRINCIPLES OF VALVE RECONDITIONING" which gives complete instructions for using Van Dorn equipment.
Copy sent free on request.

"Van Dorn" POWERFUL ELECTRIC TOOLS

"VIBRO-CENTRIC"

REG. U.S. PAT. OFF.

METHOD KITS



No. V-343 STANDARD BASIC KIT

The basis on which to build complete equipment for general shop use includes:
1 Standard Vibro-Centric Driver; 1 Heavy-Duty Stone Dressing Stand;
2 Standard Stone Sleeves; 1 Universal Kit Box.
Price, complete, specify voltage—(Code No. V-343)..... \$67.00

No. V-456 STANDARD 55° ANGLE BASIC KIT

This Kit is the same as the Standard Basic Kit, except that it is supplied with Standard 55° Angle Vibro-Centric Driver.
Price, complete, specify voltage—(Code No. V-456)..... \$73.00

No. V-416 STANDARD UNIVERSAL KIT

Most popular assortment for general service shop and average volume work. Contains all equipment for valve work on popular car and light trucks.

Includes: 1 Standard Vibro-Centric Driver; 1 Heavy-Duty Dressing Stand; 2 Standard Stone Sleeves; 5 Self-Centering Pilots (popular sizes); 10 Vibro-Centric Grinding Stones (popular sizes); 1 Universal Kit Box.
Price, complete, specify voltage—(Code No. V-416)..... \$99.50

No. V-447 STANDARD 55° ANGLE UNIVERSAL KIT

This Kit is the same as the Standard Universal Kit, except that it is supplied with Standard 55° Angle Vibro-Centric Driver.
Price, complete, specify voltage—(Code No. V-447)..... \$105.00

No. V-408 HEAVY DUTY BASIC KIT

Enables the "production" shop to assemble the equipment needed for high-speed valve seat grinding on large and special engines.

Kit includes: 1 Heavy-Duty 55° Angle Vibro-Centric Driver; 1 Heavy-Duty Dressing Stand; 2 Standard Stone Sleeves; 1 Heavy-Duty Kit Box.
Price, complete, specify voltage—(Code No. V-408)..... \$88.00

No. V-336 HEAVY DUTY UNIVERSAL KIT (Illustrated)

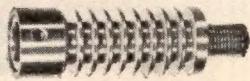
"Last word" in valve seat equipment, for large-volume shops and on larger truck, tractor and Diesel engines. Larger kit box, more capacity; Heavy-Duty equipment throughout for a wider range of sizes.

Includes: 1 Heavy-Duty 55° Angle Vibro-Centric Driver; 1 Heavy-Duty Stone Dressing Stand; 2 Standard Stone Sleeves; 1 Heavy-Duty Kit Box; 1 Pilot Turning Wrench; 5 Self-Centering Pilots (up to $\frac{7}{16}$ "'); Vibro-Centric Grinding Stones (up to $2\frac{1}{2}$ ").
Price, complete, specify voltage—(Code No. V-336)..... \$124.50

STANDARD STONE SLEEVE

Fits all Vibro-Centric Stones, except Aircraft type. Bronze bushings accurately fit self-centering pilots.

Price, complete (No. 22100)..... \$3.50



SHORT STANDARD STONE SLEEVE

To give increased clearance in grinding hard-to-reach or obstructed valve seats. The Short Standard Stone Sleeve, because of short bushing, must be used with Aircraft-type Short Shank Pilots.

No. 23652 Short Standard Stone Sleeves..... \$3.50

BALL BEARING STONE SLEEVE

Minimizes wear, preserves accuracy, gives longer service under constant use. Ball-bearings fit pilots.

No. 27200 Ball-Bearing Stone Sleeve with retainer ball for grooved pilots..... \$10.00

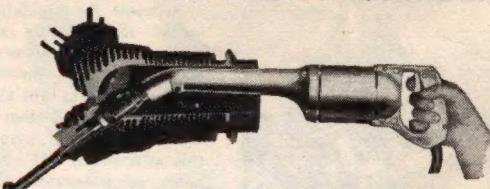
No. 19825 Ball-Bearing Stone Sleeve without retainer ball..... 10.00



"VIBRO-CENTRIC"

REG. U.S. PAT. OFF.

AIRCRAFT VALVE SEAT GRINDERS



No. V-421 AIRCRAFT 30° DRIVER

Equipped with long spindle, encased in aluminum housing, which reaches easily into cylinders of radial engines. 30° angle head brings driving spindle in line with valve guides. Gear train in angle head transmits full power; positive vibrating action built into spindle. Completely self-contained, there is no danger of the unit scarring or damaging the cylinder walls.

Spindle speed..... 10000 R.P.M. Overall length..... $20\frac{3}{4}$ "
Weight: Net..... 9 lbs. Shipping..... $10\frac{1}{2}$ lbs.
Standard Equipment—3-conductor cable and plug; instant-release trigger switch with locking pin; Universal motor.

Standard Voltage 110; also available for 220 or 250 volts.

Price, complete, specify voltage—(Code No. V-421)..... \$75.00

No. V-451 STRAIGHT AIRCRAFT DRIVER

Instead of the 30° angle head, this unit has a straight geared head, in line with the spindle for special applications.

Weight: Net..... 9 lbs. Shipping..... $10\frac{1}{2}$ lbs.
Overall length..... $21\frac{1}{4}$ "
Other specifications same as above.

Price, complete, specify voltage—(Code No. V-451)..... \$90.00

No. V-423 AIRCRAFT BASIC KIT

Contains the basic Vibro-Centric Aircraft units around which complete aircraft valve-seat reconditioning equipment can be built. The kit has ample storage room for a large assortment of Stones and Pilots. Because of the variation in Stone and Pilot sizes required in this field, we do not include any set assortment of these items in the kit. When ordering, add the prices of Stones and Pilots required to the price of the kit, or send us engine specifications and we will recommend an assortment.



Includes: 1 No. V-421 Aircraft 30° Driver; 1 No. 25248 Aircraft Heavy-Duty Dressing Stand; 2 No. 25500 Aircraft Ball-Bearing Stone Sleeves; 2 No. 25249 Pilot Wrenches for Plug Pilots; 1 No. V-508 Special Kit Box.

Price, complete, specify voltage—(Code No. V-423)..... \$129.00
No. V-508 Special Kit Box, only..... 18.00

AIRCRAFT VALVE RECONDITIONING SYSTEM

These Valve Reconditioning Systems include a Super-Service Wet-Grinding Resurfacer, Valve Reconditioning System Cabinet, and the No. V-423 Aircraft Basic Kit as listed above, minus the kit box. This complete group of equipment can be rolled up to the plane with everything necessary for valve reconditioning.

Prices, Aircraft Electric Valve Reconditioning Systems (specify voltage)—
With $\frac{1}{16}$ " Wet-Grinding Resurfacer—(Code No. V-449-VS)..... \$362.00

With $\frac{5}{8}$ " Wet-Grinding Resurfacer—(Code No. V-450-VS)..... 372.00
(See Master Catalog for complete listing of Aircraft Vibro-Centric Pilots and Stones.)

HEAVY DUTY DRESSING STAND



Adjustable bracket for various stone sizes. Angle adjustment, 0° (flat) to 90° (vertical). Micrometer feed diamond point on dressing arm. Easily read angle indicator.

Stone Capacity—Up to $3\frac{1}{2}$ "; Net weight, $10\frac{1}{4}$ lbs.

Price, complete with diamond point (No. 20153)..... \$20.00

AIRCRAFT HEAVY DUTY DRESSING STAND

Equipped with special mandrel to accommodate the short aircraft stone sleeve. No. 25248—With diamond nib..... \$20.00



POWERFUL ELECTRIC TOOLS

"Van Dorn"



CARBON REMOVING BRUSHES

Made of tempered steel wire; used with $\frac{1}{4}$ " Drill, quickly clean carbon from cylinder heads, top of pistons, valve ports, etc., leaving a burnished surface.

No. 21419 Hollow core, flare bottom brush.....	\$.81
No. 21417 Side flare brush for close corner work.....	1.28
No. 21416 Heavy duty solid wire-filled brush.....	.85
No. 21418 Small brush for cleaning Valve Guide Ports....	.75

VALVE GUIDE CLEANERS

(Use with $\frac{1}{4}$ " Drill)

Cat. No.	Minimun Size	Maximum Size	Price	Cat. No.	Minimun Size	Maximum Size	Price
21436	$\frac{1}{4}$ " to $\frac{9}{32}$ "	$\frac{9}{32}$ "	\$.98	21453	$\frac{1}{2}$ " to $\frac{35}{64}$ "	$\frac{35}{64}$ "	\$.98
21441	$\frac{5}{16}$ " to $\frac{25}{64}$ "	$\frac{25}{64}$ "	.98	21456	$\frac{5}{16}$ " to $\frac{39}{64}$ "	$\frac{39}{64}$ "	.98
22810	$\frac{11}{32}$ " to $\frac{25}{64}$ "	$\frac{25}{64}$ "	.98	21460	$\frac{5}{8}$ " to $\frac{45}{64}$ "	$\frac{45}{64}$ "	.98
21445	$\frac{7}{8}$ " to $\frac{27}{64}$ "	$\frac{27}{64}$ "	.98	17682	$\frac{7}{8}$ " to $\frac{25}{32}$ "	$\frac{25}{32}$ "	1.50
21449	$\frac{7}{16}$ " to $\frac{31}{64}$ "	$\frac{31}{64}$ "	.98	15125	Ford V-85	1.28	
				22375	Ford V-60	1.70	

"GRUV-TOP" AUTOMOTIVE SELF-CENTERING PILOTS

Self-Centering Pilots provide an accurate, rigid axis for the operation of Vibro-Centric Stones, and Valve Seat Cutters. The Pilot has two accurately machined tapers, one at the top which fits into the top of the valve guide, and one at the bottom, on which split sleeve expands into the lower end of the guide. The expanding feature is important in compensating for worn guides; also eliminates a large stock of "oversize" pilots, as Self-Centering Pilots expand from $.020$ " to $.030$ ".

NOMINAL SIZE	RANGE	CATALOG NUMBER	PRICE COMPLETE	SLEEVE NUMBER	PRICE OF SLEEVE	NOMINAL SIZE	RANGE	CATALOG NUMBER	PRICE COMPLETE	SLEEVE NUMBER	PRICE OF SLEEVE
$\frac{1}{4}$ "	.233"—.254"	14423	\$3.42	13908	\$.75	$\frac{15}{32}$ "— $\frac{31}{64}$ "	.464"—.495"	14430	3.42	13910	.75
		25245	5.14	13908	.75			16999	5.14	13910	.75
$\frac{9}{32}$ "— $\frac{19}{64}$ "	.277"—.303"	15792	5.14	15145	.75	$\frac{1}{2}$ "— $\frac{17}{32}$ "	.496"—.535"	14431	3.42	13905	.75
$\frac{5}{16}$ "— $\frac{21}{64}$ "	.308"—.339"	14425	3.42	13902	.75			17643	5.14	13905	.75
		23484	5.14	13902	.75			16786	5.14	13905	.75
		18608	5.14	13902	.75			16047	5.14	13905	.75
		16197	5.14	13902	.75			23975	8.55	13905	.75
		20970	5.14	13902	.75			23665	8.55	13905	.75
		21300	3.42	13902	.75			26908	8.55	13905	.75
$\frac{11}{32}$ "	(for counter-bored guides)	23633*	3.42	13904	.75			19894	5.14	13905	.75
		21302	3.42	13904	.75			22184	5.14	13905	.75
$\frac{11}{32}$ "— $\frac{23}{64}$ "		16199*	3.42	13904	.75			27108	8.55	24497	1.00
		14426	3.42	13904	.75						
		24319	8.55	13904	.75	$\frac{17}{32}$ "— $\frac{9}{16}$ "	.531"—.562"	14432	3.42	13899	1.00
		26528	5.14	13904	.75			16788	5.14	13899	1.00
		23833	8.55	13904	.75			15656	5.14	13899	1.00
		24310	8.55	13904	.75			23522	5.14	13899	1.00
$\frac{3}{8}$ "	(for counter-bored guides)	21304	3.42	13903	.75			26864	8.55	13899	1.00
$\frac{3}{8}$ "— $\frac{25}{64}$ "		14427	3.42	13903	.75			19203	8.55	13899	1.00
		16207	5.14	13903	.75			26443	8.55	13899	1.00
		16201	5.14	13903	.75						
		20667	5.14	13903	.75	$\frac{19}{32}$ "— $\frac{39}{64}$ "	.594"—.620"	14435#	3.42	13899	1.00
		17345	5.14	13903	.75						
		16204	5.14	13903	.75	$\frac{5}{8}$ "— $\frac{21}{32}$ "	.621"—.661"	14433	3.42	13906	1.00
		23937	5.14	13903	.75			18006	5.14	22582	1.00
$\frac{25}{64}$ "		17001	5.14	14653	1.00			17000	5.14	13906	1.00
$\frac{15}{32}$ "— $\frac{27}{64}$ "	.391"—.406"	14428	3.42	13909	.75			23939	5.14	13906	1.00
		17396	5.14	13909	.75			23578	5.14	13906	1.00
		16826	5.14	13909	.75			21062	8.55	13906	1.00
$\frac{27}{64}$ "— $\frac{7}{16}$ "	.402"—.424"	16206	5.14	13909	.75			26143	8.55	13906	1.00
		14429	3.42	13901	.75						
		17873	8.55	13901	.75	$\frac{11}{16}$ "— $\frac{23}{32}$ "	.683"—.724"	15178	4.28	15046	1.50
		16784	5.14	13901	.75			18242	6.42	15046	1.50
		24343	8.55	13901	.75			26327	8.55	15046	1.50
		22989	5.14	13901	.75			18244	6.42	15046	1.50
		15179	5.14	13901	.75			26325	8.55	15046	1.50
		23971	5.14	13901	.75						
		15743	5.14	13901	.75						
		23973	5.14	13901	.75						
		17903	5.14	13901	.75						

*For Chevrolet. # For Ford Model "A".

"GRUV-TOP" Plug Type Automotive Pilots

RANGE	CATALOG NO.	ENGINE	PRICE COMP.
.8458"—.8525"	18248	Ford "60"	\$3.42
1.0278"—1.0330"	14155	Ford "V-8"	3.42
1.029"—1.033"	22337	Lincoln Zephyr	6.42

No. 19829 Pilot Turning Wrench..... \$4.50

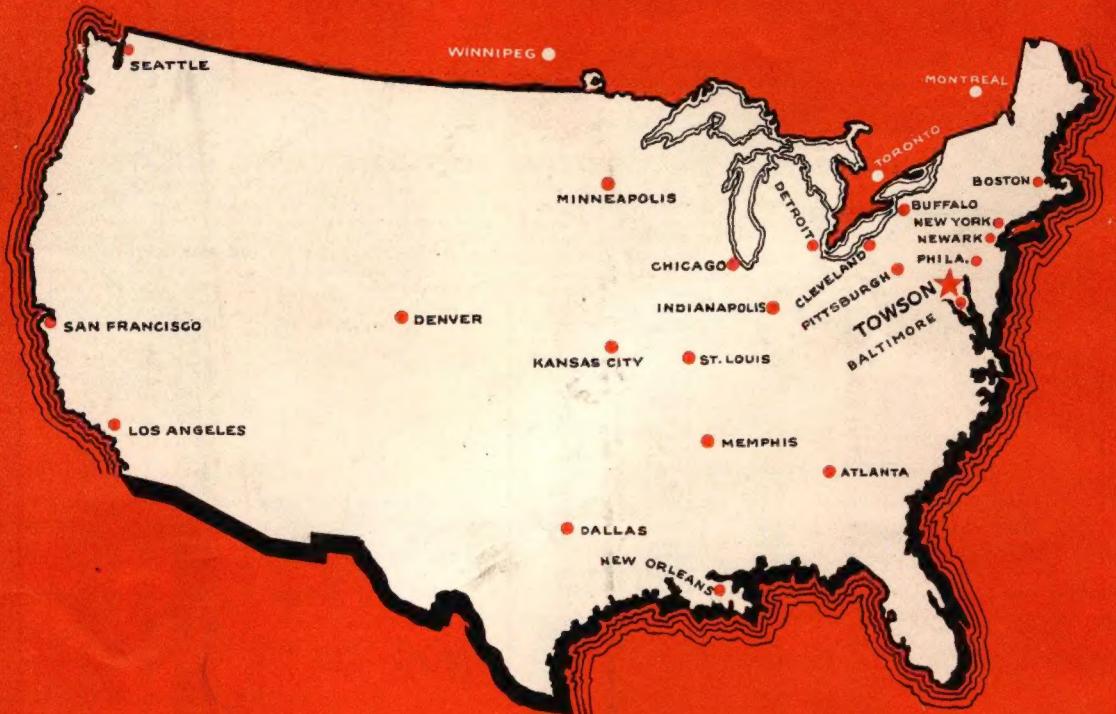
VIBRO-CENTRIC VALVE SEAT GRINDING STONES

Made especially for grinding by the Vibro-Centric Method. Stones are available in three grades—one for grinding cast-iron and soft steel seats; another for hard steel and stellite inserts; and a third for super-polishing either type of seat after grinding. The finishing stone is only necessary where a high-lustre finish is desired. All stones have threaded steel inserts which screw directly on the end of the stone sleeve.

SIZE	FOR SOFT STEEL AND CAST IRON				FOR HARD STEEL AND STELLITE				SIZE	FOR FINISH-GRINDING		PRICE EACH
	45° Stone	30° Stone	20° Stone	70° Stone	45° Stone	90° Stone	30° Stone	20° Stone		45° Stone	30° Stone	
$1\frac{1}{4}$ "	14216	14197	.....	.....	14217	.....	14218	.....	$1\frac{1}{4}$ "	14414	14413	\$1.70
$1\frac{3}{8}$ "	18541	23666	.....	.....	18540	.....	23667	.....	$1\frac{3}{8}$ "	18542	.....	1.70
$1\frac{1}{2}$ "	14084	14198	14092	23821	14056	.....	14219	14107	$1\frac{1}{2}$ "	14382	14370	1.70
$1\frac{5}{8}$ "	14063	14199	14093	.....	14100	.....	14287	14108	$1\frac{9}{16}$ "	14383	14371	1.70
$1\frac{3}{4}$ "	14085	14090	14094	.....	14049	.....	14105	14109	$1\frac{5}{8}$ "	14384	14372	1.70
$1\frac{11}{16}$ "	23957	.....	.....	.....	14101	.....	14288	14110	$1\frac{11}{16}$ "	14385	14373	1.70
$1\frac{7}{8}$ "	14086	14268	14095	.....	14102	15892	14106	14111	$1\frac{7}{8}$ "	14386	14374	1.70
$2\frac{1}{16}$ "	14064	14091	14096	.....	14282	.....	14289	14112	$2\frac{1}{16}$ "	14387	14375	2.10
$2\frac{1}{8}$ "	14087	14278	14097	23822	14103	.....	14290	14113	$2\frac{1}{8}$ "	14388	14376	2.10
$2\frac{3}{4}$ "	14088	14279	14098	23823	14104	15893	14291	14113	$2\frac{3}{4}$ "	14367	14376	2.10
$2\frac{3}{8}$ "	16929	.....	23668	23824	16951	.....	23669	.....	$2\frac{3}{8}$ "	14370	14371	2.10
$2\frac{1}{4}$ "	14089	14280	14099	.....	14050	.....	14291	14111	$2\frac{1}{4}$ "	14389	14377	2.10
$2\frac{5}{8}$ "	14285	14281	14274	.....	14239	15894	14292	14270	$2\frac{5}{8}$ "	14390	14378	2.55
$2\frac{7}{8}$ "	14153	14282	14275	.....	14200	.....	14293	14271	$2\frac{7}{8}$ "	14391	14379	2.55
$2\frac{15}{16}$ "	26148	14283	14276	.....	14295	.....	14269	14272	$2\frac{15}{16}$ "	14392	14380	2.55
$2\frac{7}{8}$ "	14286	14284	14277	.....	14243	.....	14294	14273	$2\frac{7}{8}$ "	14393	14381	2.55
$3"$	14154	14284	14277	.....	14273	.....	14294	14273	$3"$	14393	14381	2.55
$3\frac{1}{8}$ "	21465	16971	25749	.....	21464	.....	16970	25947	$3\frac{1}{8}$ "	21466	.....	3.00
$3\frac{3}{4}$ "	21468	25948	25951	.....	21467	.....	25947	25950	$3\frac{3}{4}$ "	21469	25949	3.00
$3\frac{5}{8}$ "	21471	26446	26449	.....	21470	.....	26445	26448	$3\frac{5}{8}$ "	21472	26447	3.00
$3\frac{1}{2}"$	21474	26527	.....	21473	.....	26473	.....	$3\frac{1}{2}"$	21475	.....	3.00	

Prices and Specifications of larger diameter stones can be secured on application.

"Van Dorn" SERVICE



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THE VAN DORN ELECTRIC TOOL COMPANY

(Div. of Black & Decker Mfg. Co.)

TOWSON 4, MARYLAND, U. S. A.